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NEXT WEEK

The British Pharmaceutical Conference will meet in Bristol, under the presidency of Mr. T. H. W. Idris. The Chemist and Druggist of August 1—that is, our next issue—will contain the brightest possible report of the proceedings, including the President's address and all the papers, with the discussion upon them. The Chemist and Druggist reports of these annual meetings are noted for their accuracy, and the numbers containing them are excellent for advertisers who wish to appeal direct to the members of the Conference. The Publisher will be glad to receive instructions for space on or before Wednesday, July 29.

Summary.

Several Points in medicine-stamp law must have first place.

A Problem in liability for postcard solutions is given on p. 139.

A Number of Letters on the subject appear in our correspondence section.

The quantities of the ingredients are necessary for a full disclosure. So the Board say, thus confirming our view of the matter (p. 139).

Many valuable formulæ for known, admitted, and approved remedies have appeared in The Chemists' and Druggists' Diaries. The Board of Inland Revenue will not require the composition of these articles to be put on the labels; merely "prepared according to The Chemists' and Druggists' Diary" (p. 138).

A Prescription stamped by three score of chemists is reproduced on p. 171.

The Names of those who have passed the Minor examination in London this month are given on p. 123.

Bristol and Clifton furnish interesting illustrated notes in reference to the pharmacies therein (p. 136).

An Appreciation of Mr. T. H. W. Idris, President of the British Pharmaceutical Conference, begins on p. 145.

A New cynogenetic body (not alkaloid as stated on p. 155) has been discovered by Dunstan and Henry in Lima beans.

The Vajsenhus Pharmacy in Copenhagen has a remarkable history, which is retold on p. 156 with appropriate illustrations.

The Questions set at this month's Irish pharmaceutical examinations (exclusive of the Preliminary) are printed on p. 123.

The free sale of ninety-five proprietary medicines (including several of English origin) will be prohibited in Germany after this year (p. 140).

Our Report of the annual meeting of the Society of Chemical Industry is completed with notes on the excursions and annual dinner (p. 121).

The Medical View of the ethics of dispensing and of counter-prescribing on p. 150 is by Dr. James Barnet, with whom we do not necessarily agree.

The ways of peppermint oil adulterators are not yet past finding out Messrs. Parry and Bennett tell on p. 154 how they discovered African copaiba in an American oil (p. 154).

Messrs R. White and J. F. Child were found guilty of the charge under the Customs Act of purchasing smuggled saccharin, and they have to pay over 4,000*l.* (p. 180).

The Federation of Local Pharmaceutical Associations meets in Bristol next week, after the Conference, and in anticipation we print the annual report and other particulars (p. 124).

An important decision respecting eau-de-Cologne is reported on p. 178. It still further narrows down the question of "the original," and it echoes a recent attempt at flotation in England.

A St. Helens man, who sells unstamped 2*d.* boxes of liable ointment, gave an entertaining display at the local court last week, when answering a summons under the Medicine-stamp Acts (p. 178).

The Court of Session Judges say that a S.W. Bottle Association which restricts its members in certain directions is a trade union, and its registration as a limited company has to be annulled (p. 178).

Radium Emanations give the spectrum of helium, according to Ramsay and Soddy (p. 121). They also are curative, and Mr. Harrison Glew tells his fellow-pharmacists all about the matter in an illustrated article on p. 143.

The improved demand for quinine has been maintained in second-hands, and prices are again fractionally dearer. Cream of tartar is easier on the spot, owing to absence of business. Japanese vegetable-wax is firmer, both "to arrive" and on the spot. WCOP peppermint oil has been in demand for export to the United States. Isinglass went dearer in auction (p. 190).

For many other items in the issue, see Contents.

This section of the Summer Number went to press on Wednesday, hence any news of importance received after that will be put in the Coloured Supplement, which is inserted in every copy of this issue.

Buyers all over the world who receive this number will observe that it gives them excellent scope for replenishing their stocks and attracting new business by writing orders for the goods which are advertised herein. The pages and insets which the Publisher has brought together are about the most interesting and profitable matter any business man can study.

Corner for Students.

CONDUCTED BY LEONARD DOBBIN, PH.D.

QUALITATIVE-ANALYSIS FOR JUNIOR STUDENTS.

THE next exercise in qualitative-analysis will be distributed to students towards the end of August, and due intimation of it will be made in our issue for August 22.

REPORTS.

The powder distributed to students on June 24 consisted of equal parts by weight of zinc sulphide, zinc hydroxy-carbonate, and potassium aluminium sulphate (potash alum).

The calculated composition of such a mixture is

Zn	41·5
Al	1·9
K	2·7
S	11·0
CO_3	5·8
SO_4	13·5
OH	6·6
H_2O	16·9
	99·9

The powder also contained, as impurities, a small quantity of calcium and traces of ammonium salts and of chloride.

Samples of the powder were distributed to fifty-six students, and twenty-nine reports were sent in for examination.

All our correspondents succeeded in detecting the presence of zinc. The failures in the detection of the other constituents of the powder were: (*a*) metallic radicals: aluminium, 5; potassium, 10; (*b*) acid radicals: carbonic, 15; sulphuric, 2; hydrosulphuric, 3. Eight students failed to observe that water was evolved when the powder was heated in a dry test-tube.

Although the present exercise was of a simple description, it was intentionally arranged to present certain features which should serve as tests of careful and thorough analytical examination. One of these features was that the aluminium was present only in small proportion, while another was that the brisk effervescence caused by the action of dilute hydrochloric or sulphuric acid on the powder was due to the liberation both of carbonic anhydride and of hydrogen sulphide.

When aluminium is present in moderate quantity, in absence of iron and chromium and of phosphates, its presence is quite easily recognised. When its quantity is small, however, the precipitate of aluminium hydroxide obtained in the systematic analysis is liable to be overlooked on account of its translucent character; while the addition of too great an excess of ammonia may completely re-dissolve any precipitate of this substance which has at first been formed (compare *C. & D.*, June 27, 1903, page 1004). Care and attention were necessary in the present instance in order to avoid error due to one or other of the causes referred to.

The fact that carbonic anhydride and hydrogen sulphide were liberated together when the powder was treated with dilute hydrochloric or sulphuric acid was responsible for many of the failures in the detection of one or other of these gases. Most students observed the very noticeable effervescence produced on adding the acid, and recognised the presence of hydrogen sulphide by its odour; but a surprisingly large number of those who did so made no attempt to ascertain whether the evolved gas did or did not contain carbonic anhydride also. As we have stated before in this column, omissions of this description mark one of the weakest points in the analytical procedure of the majority of our correspondents. A reagent is added and a certain reaction is observed which furnishes sufficient evidence of the presence of a particular constituent, and then the possibility of the presence of another constituent, which might, so far, yield a similar reaction, is too often entirely ignored. In the case under notice the observed effervescence seemed to be explained by the very easily recognised evolution of hydrogen sulphide, while on the part of numerous students no test for carbonic anhydride was applied, nor does the question of the possible presence of a carbonate in the powder appear to have been entertained. A few students observed the effervescence, and tested for and found carbonic anhydride, but appear to have neglected to apply the simple test of smelling the evolved gas; and, in consequence, they failed to detect the presence of a sulphide. The fact can scarcely have escaped the notice of any except the more recent of our correspondents that many of our exercises are specially designed (as in the present instance) forcibly to draw attention to the need for more thorough and complete examination.

A few correspondents seem erroneously to have supposed that the evolution of hydrogen sulphide on treatment of the powder with dilute hydrochloric acid indicated the presence of a sulphite.

The proportion of our correspondents who failed to observe (or who, having observed, ignored) the evolution of water when the powder was heated in a dry test-tube was higher than is usual in similar cases. It is a mistake to regard the phenomenon as unimportant because it is commonplace; moreover, the omission to report the evolution of water is treated as an analytical error and results in the loss of marks.

PRIZES.

The First Prize for the best analysis has been awarded to

ROBERT W. GARROW, c/o Lindsay & Gilmour, 11 Elm Row, Edinburgh.

The Second Prize has been awarded to

ARTHUR E. YOUNG, 16 Gallowtree Gate, Leicester.

First Prize.—Any scientific book that is published at a price not greatly exceeding half-a-guinea may be taken as a first prize.

Second Prize.—Any scientific book which is sold for about five shillings may be taken as a second prize.

The students to whom prizes are awarded are requested to write at once to the Publisher naming the book or books they select.

MARKS AWARDED FOR ANALYSES.

1. *Correspondents who are unqualified:*

Robert W. Garrow (1st prize)	98	Hypo	78
Arthur E. Young (2nd prize)	97	Beta-Naphthol	77
Irishman	96	J. H. Beswick	75
Morphina	96	Lobelia	74
Salicine	96	Oxalis	74
Silver	95	Q. E. D.	74
Vasogen	94	Poly	68
G. K. F.	90	Tin	68
Alf. Wade	87	B. M. N.	67
W. P. P.	86	J. D. B.	66
F. B. Fox	83	Isomeny	55
Cruce Vinco	80	Guaiacol	42

2. *Correspondents who have not indicated that they are unqualified:*

Amature	81	P. S.	67
Amidobenzene	27	Radix	62
Festina Lente	64		

TO CORRESPONDENTS.

SILVER.—Confirmatory evidence of the presence of a sulphide should not be sought by treating the substance under examination with concentrated sulphuric acid, since certain reducing agents act upon this reagent with the liberation of hydrogen sulphide.

VASOGEN.—It does not appear that you proved at any stage of your analysis that phosphates were absent—a serious omission in the present instance. You should use sodium hydrogen tartrate instead of tartaric acid in testing for potassium. The formulæ which you write for sodium-phosphate and sodium-carbonate require revision.

G. K. F.—You appear to have satisfied yourself that the powder gave off both carbonic anhydride and hydrogen sulphide when treated with dilute sulphuric acid; but you do not furnish evidence which would satisfy others. It is not sufficient to state your conclusions without showing how these were arrived at.

F. B. Fox.—Evolution of hydrogen sulphide on heating the powder with concentrated sulphuric acid was not necessarily due to the presence of a sulphide. See reply to "Silver."

Cruce Vinco.—You did not conclusively prove either the presence of zinc or the absence of manganese by adding potassium ferrocyanide to the original hydrochloric-acid solution and obtaining a white precipitate. Both zinc and manganous salts give white precipitates with potassium ferrocyanide. It was not possible to prove the absence of magnesium by adding ammonium chloride, ammonia, and sodium phosphate to the original solution and observing that no precipitate was produced, since, assuming that enough ammonia was added to render the liquid alkaline, a precipitate of aluminium hydroxide, or phosphate, or both, was quite certain to be obtained. See first sentence of reply to "Vasogen."

J. H. Beswick.—You could not obtain evidence of the presence of zinc by treating the ammonium-hydrosulphide precipitate with acetic acid on the filter and adding potassium ferrocyanide to the percolate. The latter did not contain zinc, since zinc sulphide is insoluble in acetic acid. The mere occurrence of effervescence does not prove carbonate to be present; it is necessary to show that the gas given off contains carbonic anhydride.

Oxalis and Poly.—We are rather at a loss to understand your failure to obtain distinct evidence of the presence of potassium, considering the pains you took in testing for this metal. There was a small but distinct residue left when the filtrate from the zinc, &c., was evaporated to dryness and ignited; and it was not difficult to show that this residue contained potassium. Your failure to detect the evolution of carbonic anhydride shows that your mode of testing for this gas was not sufficiently delicate.

Tin.—It was probably a consequence of the translucent nature of freshly precipitated aluminium hydroxide that you failed to observe the precipitation of this substance on adding ammonium chloride and ammonia; or it may be that you added ammonia in sufficient excess to dissolve the whole of the (not very abundant) precipitate which was at first formed. See the general remarks.

Isomeny.—The precipitate which you obtained on adding barium nitrate in testing for acid radicals should not have dissolved completely on treatment with hydrochloric acid unless its quantity was exceedingly small; but note that even barium sulphate is not *quite* insoluble in acids. We cannot explain how your hydrochloric acid becomes contaminated with hydrogen sulphide, unless the bottle in which you keep it has a defective stopper. You should employ distilled water in preparing your reagents, even if this necessitates distilling it yourself on the small scale.

Guaiacol.—You do not appear to have tested for aluminium, so that your failure to find it is, so far, explained; but it is difficult to understand why you omitted to test for it. You ought not to have overlooked the fact that the carbonic anhydride evolved on treating the powder with dilute sulphuric acid was mixed with hydrogen sulphide. The odour of the latter was very distinctly noticeable.

English News.

Local newspapers containing marked items of news interesting to the trade are always welcomed by the Editor.

Brevities.

The freehold premises, 9, 10, and 11 Broad Street, Bristol, occupied by Messrs. Henry Hodder & Co. (Limited), cash chemists, who are removing to Wine Street, were offered by public auction on July 23, and were withdrawn at 8,900*l.*

Two girls, Emma Wooldridge (16) and Constance White (15), belonging to Southsea, and formerly employed in the drug-store of the Timothy White Company at Landport, left their homes on July 18, and have not been heard of since.

At North London Police Court on July 17, Messrs. W. C. Barnes & Co. (Limited), manufacturing chemists, of Phœnix Wharf, Wallis Road, Hackney, were fined 10*s.* and 12*s.* 6*d.* costs for allowing "dense volumes of black smoke" to be emitted from their chimney.

A general meeting of the members of the Jenner Institute has been called for July 22 to consider the proposal of the governing body: "That the name of the Institute be changed from the Jenner Institute of Preventive Medicine to the Lister Institute of Preventive Medicine."

A fire broke out on July 18 on the premises of the Sanitas Company (Limited) at Sockele Street, Burdett Road, E. Lime slaked by the heavy rain which fell that morning caused the contents of a store to catch fire, and some damage was done to that building before the flames were extinguished.

An alarm of fire was raised at the premises of the Timothy White Company, wholesale chemists and druggists, at Chandos Street, Portsmouth, on July 20. The police and fire-brigade were soon on the spot, when it appeared that from some unexplained cause a fire had broken out in a dustbin in the yard. A hydrant was got to work and the flames subdued.

The West Riding analyst has reported to the County Council that during the quarter ended March 31 it has only been necessary to prosecute in one case of adulterated drugs. This was a case in which a sample of sweet spirit of nitre contained only five-sevenths of the minimum proportion of ethyl nitrite. Numerous samples of drugs were taken, but found to be genuine.

For publishing a defamatory libel concerning Dr. James Bryan, the Chatham public vaccinator (son of Mr. J. N. Bryan, retired chemist, Chatham), Frederick Charles Hills, a commission-agent and a well-known anti-vaccinator, residing at Chatham, was convicted at the Kent Assizes last week, and bound over in his own recognisances of 10*l.* to come up for judgment if called upon.

At the Kent Assizes last week, Samuel Tooley and Ralph Ernest Shorey were charged with stealing a quantity of platinum (to the value of 100*l.*), the property of the King, from the chemical laboratory attached to the Royal Engineers' Institute at the School of Military Engineering at Brompton (Chatham); and Herbert Parker, a dentist, of Chatham, was charged with receiving the goods well knowing them to be stolen. The goods, which consisted of platinum dishes and crucibles, were taken from a cupboard in the laboratory. Some were sold for 60*l.*, and the money was divided between the prisoners. Tooley and Parker were sentenced to seven months' hard labour, and Shorey nine months' hard labour.

The Medical Officer and the Dispenser.

At the meeting of the Cardiff Board of Guardians on July 18, the Dispensary Committee reported that they had made an inquiry in two cases in which it was alleged by Dr. Williams, the district medical officer, that the wrong medicines had been dispensed by Mr. Taylor, the dispenser, but that they did not think the evidence sufficient to bring the charge home. Mr. F. J. Beavan asked how the committee came to that conclusion? Mr. J. J. Ames, chemist, replied that Mr. Taylor pointed out that if the bottles were exposed to the light for a month the medicine would change in colour. Besides, he denied in one case that the sample produced was the medicine he dispensed, while with regard to the second case, when asked why he did not keep the sample sent back by Dr. Williams, he replied that the difference between tincture and powder of rhubarb was so slight, and the mistake so trivial, that he did not anticipate the sample would be required. There was also a possibility that the medicines had been tampered with while in possession of the patients, and the committee therefore thought they had better give Mr. Taylor the benefit of the doubt. He moved the adoption of the committee's report. Mrs. Norman thought a strong case had been made out for an inquiry, and suggested that the matter be brought before the Local Government Board. Mr. Beavan moved, as an amendment, that they warn Mr. Taylor that if there should be any sample again complained of it must not be destroyed, and that he must give the utmost possible care to the making-up of prescriptions. Mr. Ames accepted this amendment, and it was added to the report of the committee, which was then adopted.

Poor-law Dispensers' Association.

A meeting of this Association was held at Surrey House Victoria Embankment, W.C., on July 17, at 8.30 p.m. Mr, Montague J. Smith presided. It was decided, after discussion, that the Association should affiliate with the National Association, and Messrs. Thomas and Lindsey were elected as auditors to examine the accounts at the end of the financial year in September next. Mr. G. B. Walker, Greenwich Infirmary, read a paper on "Poisons." Death by poison, both vegetable and mineral, said Mr. Walker, has been a favourite way of getting rid of an opponent from time immemorial, but in the Middle Ages it advanced to a fine art. He gave several historical examples. Mr. Walker then dealt categorically with the poisons appearing in Parts 1 and 2 of the Poison Schedule to the Pharmacy Act, his most interesting points being the references to cases in which the drugs had proved fatal. In conclusion, Mr. Walker expressed the hope that his paper would cause his *confrères* to reflect upon the great responsibilities which rest upon their shoulders in handling these poisonous substances. The paper was augmented by a few samples of poison-bottles and a book of slip poison-labels. A short discussion followed, and after a vote of thanks to Mr. Walker, the meeting terminated.

Birmingham Notes.

The local Pharmaceutical Association has some trouble in getting a new President.

Complaint is made by the officials that the Eye Hospital is used by unscrupulous persons who can well afford to pay for advice and instruments. The Lord Mayor has emphasised the complaint.

Sir Ernest Spencer, M.P., is suffering from serious inflammation of the synovial membrane of the knee-joint, which entails entire rest, and as a consequence he has paired for the rest of the Parliamentary Session and cancelled all his engagements. He was formerly a pharmacist.

For a neat and very effective window-blind, one in our city's principal street and at the premier *épicier's* establishment will take some beating. A perfectly uncreased canvas lean-to of a green colour, and with the owner's name in large plain block gold letters "Barrow's Stores." Passers-by stopped to look at the unique display.

Manchester International Exhibition.

At a meeting recently held in Manchester it was unanimously resolved to hold an international exhibition in Manchester in 1905, and a committee was appointed to take the necessary steps to that end. The committee have issued a synopsis of the scope of the proposed exhibition, which has been distributed. On receipt of replies to this circular, the Lord Mayor of Manchester will be requested to call a meeting of citizens to consider the matter, and into the hands of that meeting the preliminary committee will resign their functions. The circular says there is a practically unanimous desire that an exhibition should be held. It will be the first international exhibition ever held in Manchester, and the success of the Glasgow exhibitions in 1888 and 1901, with their large surpluses, is held out as an inducement. The population of Lancashire, with the West Riding of Yorkshire, Cheshire, Staffordshire, and Derbyshire—all within easy access of Manchester—is about ten millions. Several suitable sites are available, and the necessary funds will be provided by guarantors. The scope, classification, music, lighting, entertainments, and refreshments are all detailed, and special attractions are promised in the shape of an automobile track for displays, aërial navigation, submarine boats, &c. The Secretary of the preliminary working committee is Mr. W. King, 27 Brazennose Street, Manchester.

An Abortion-charge.

At Leeds, on July 21, James A. H. Toulson, chemist and druggist, Meanwood Road, was charged with having incited a girl named Sarah Bennett to procure abortion. The evidence for the prosecution was that the girl went with her sister to defendant's shop. The defendant was told by the sister of the girl's condition, and was asked if he could supply anything to "put her right." He asked her several questions, and it was suggested that she should get a sovereign from her mistress, presumably for her mother, to pay for a bottle of medicine. She got the money and the medicine, which, after the lapse of two days, began to have some effect. A second bottle was subsequently procured for her, but not used, as she became seriously ill, and afterwards had a miscarriage. The quantity of medicine was insufficient to afford a reliable analysis, but the prosecuting solicitor contended that it was sufficient for him to prove that some kind of medicine had been supplied to the girl, that she took it, and that the miscarriage actually took place. Defendant said he had given nothing but of an innocent character. There was nothing in his medicine that would be dangerous to any part of the human system. He wanted to read an answer to the charge, but the Stipendiary would not allow it. Sarah Bennett, in the witness-box, gave a detailed narrative of the circumstances of her visit to the defendant's shop, and was cross-examined by the defendant. Mr. Thos. Fairley, the Leeds City public analyst, said that only a few drops of the liquid remained in one of the bottles, and that, so far as he could ascertain, did not contain ergot. The other bottle contained 6 oz. of a weak infusion of aloes. The defendant said he never had either aloes or ergot in his shop. Ultimately, defendant, who protested his innocence, was committed to the assizes.

The Dover Drug-contract.

Another discussion arose at the meeting of the Dover Town Council on July 15 relative to the tenders for drugs. Mr. A. L. Thompson, chemist and druggist, of Dover, who was the only person who tendered for the supply as originally advertised, again wrote asking why the Council had not accepted his tender, which was a fair and proper one. He complained that two of the members of the Council had imputed to him dishonourable conduct in suggesting that he had formed a ring. He considered that unless these councillors were prepared to prove it, the least they could do would be to withdraw the statement. The fresh tenders received were opened. One was 7½ per cent. off schedule prices, another 25 per cent., and a third 17½ per cent. It was stated that originally Mr. Thompson tendered 1¼ per cent. below. On the tender of the Dean Drug Company, Grand Shaft Pharmacy, Dover, at 17½ per cent. off, being accepted, Mr. Bradley asked if the firm was one having shops all over the kingdom. Referring to Mr. Thompson, the speaker said that that gentleman was entitled to have the statements made against him either proved or withdrawn. He was charged with having arranged a ring, which placed an imputation not only upon him, but on every chemist in the town. He considered it ought to be withdrawn. The Town Clerk denied having said that Mr. Thompson had arranged with the other chemists that there should be no opposition. Mr. Edwin said that what the Town Clerk remarked was that "Mr. Thompson said, 'Now the competition had ceased, he thought he could get a price which would be a fair one.'" Sir Wm. Crundall said that no harm had been done to the town, as they had now got a tender at 17½ off, instead of 1¼; and after some further argument the matter dropped.

Sport.

Notts Chemists *v.* Hoveringham.—A cricket-match between these teams was played at Nottingham on July 16. The visitors, on going to the wickets, scored a total of 67, the aggregate number of runs obtained by the chemists being only 29.

There was a good attendance at the sixth annual sports held in connection with Boots' Athletic Club, at Nottingham, on July 18. Messrs. Glenn, Holbhouse, and J. Palmer were the judges, and Mr. E. S. Waring acted as starter. The Nottingham Junior Sax-Tuba Band was in attendance. Mrs. Jesse Boot, at the conclusion of the sports, presented the awards.

Poisonings.

Seven fatalities from poisoning are recorded since our last report, two being misadventures. An old woman named Eccleston poisoned herself at Blackburn with carbolic acid. A stick-mounter named Pownall died in St. Bartholomew's Hospital from oxalic-acid poisoning. A Shoreditch Jewess and a Norwich chambermaid each committed suicide with spirit of salt. Harry Booth, living in Euston Road, quarrelled with his *fiancée*, and poisoned himself with some poison unnamed. The misadventures occurred at Lambeth and at Seacombe. John Brock, a Lambeth photographer, is stated to have swallowed some mercuric-chloride solution in mistake for vinegar; while Mrs. Charlotte Pember, wife of Mr. W. H. Pember, analytical chemist, Seacombe, took an overdose of cocaine to relieve violent neuralgia and toothache. John Edermanger, of Wickham Street, Vauxhall, drank poison on July 21 in mistake for ginger-beer, and was taken in a dying state to St. Thomas's Hospital; and on the same day a man while walking along Snow Hill was observed to take a small bottle from his pocket and put it to his lips. Presently he fell, and, when taken to St. Bartholomew's, was found to be suffering from the effects of poison.

Irish News.

Local newspapers containing marked items of news interesting to the trade are always welcomed by the Editor.

Pharmaceutical Society of Ireland.

At the recent Registered Druggist examination, held in Dublin, Sarah O'Neill, L. P. Murphy, and H. B. McKinstry passed. Three candidates were rejected.

Analyst's Salary Increased.

At the meeting of the Drogheda Guardians last week it was decided to increase the salary of the analyst (Mr. D. S. Jardin) from 5*l.* to 10*l.*

Personal.

It is reported that Mr. J. S. Ashe, M.P.S.I., Dublin, is to be presented to the King and Queen on the occasion of the Royal visit to the Adelaide Hospital, Dublin, where Mr. Ashe is acting as clinical assistant.

In a note in this column last week on the new member of the Irish Pharmaceutical Council his name was given incorrectly: it should be David Mitchell Watson. He was formerly a branch manager (not director) of Messrs. Hayes, Conyngham & Robinson (Limited).

Medical Officers' Salaries.

Something like a strike of workhouse medical officers in Ireland will eventuate if the terms which the Medical Association is imposing on its members are not accepted by Boards of Guardians. In several places a tussle on the question of pay has occurred, the doctors coming off invariably victorious, though not to the full extent sought (200*l.* a year); and the most recent case in point is that of Enniscorthy (co. Wexford). Here the Guardians advertised a vacancy in Clonroche Dispensary District at 100*l.* a year and the usual fees. The co. Wexford Branch of the Medical Association resolved that no candidate should accept the position at less than 200*l.*, and no one offered his services. Then the Guardians offered 120*l.*; but still the same result, or, rather, no result. The Local Government Board was appealed to by the Guardians, and the ruling authority suggested the advisability of abolishing Clonroche as a district and apportioning it amongst the other doctors of the union, giving each a proportionate increase to bring the yearly salary up to 120*l.* Then the Medical Association held a meeting, and passed a resolution to the effect that, if the Clonroche dispensary district were abolished, the four other dispensary doctors of the union would resign. The Guardians discussed this threat at their last meeting, and they decided, by thirty-three votes to nine, to ask the Local Government Board to continue the district, and that the Board also allow the Guardians to offer a salary of 150*l.*

Scotch News.

Local newspapers containing marked items of news interesting to the trade are always welcomed by the Editor.

Aberdeen Items.

At a meeting of the sub-committee of the Public Health Committee of Aberdeen Town Council last week the question of the remuneration of the city analyst (Mr. Thomas Jamieson) and the fees for analysis was under consideration. Mr. Jamieson has had a retaining fee of 100*l.* per annum, and the sub-committee agreed to recommend that the fee be continued as at present. With reference to the existing scale of fees for analysis, it was agreed to recommend that where these at present amount to 2*s.* 6*d.* they should be increased to 5*s.*, and that in cases where the charge is 5*s.* it should be increased to 7*s.* 6*d.*

The fourteenth annual conference of the Museums Association was held at Aberdeen last week. On July 14 a paper was read by Mr. E. M. Holmes, F.L.S., curator of the Pharmaceutical Society's museum, on "A Method of Preserving the Natural Colours of Dried Leaves and Flowers for Museum-specimens." He referred to the value of chemical science in helping the curator, and showed how the changes in colour, which take place not only in plants, but also in other objects, due to oxidising ferment, may to a great extent be prevented. Mr. Maclauchlan (Dundee) thought if Mr. Holmes could show them a plan for preserving the colour of the bindings of books and paintings he would be regarded as a benefactor of the race. The President (Mr. F. A. Bather, M.A., D.Sc., F.G.S., British Museum) pointed out that the only objection to Mr. Holmes's method was that, while the colour was preserved, the specimens were rendered brittle, whereas there ought to be a certain amount of flexibility. Mr. J. A. Watson (Sheffield) referred to the success he had had in drying specimens in hot sand and then having them dipped in hot paraffin wax.

French News.

(From our Paris Correspondent.)

M. Jean Amie, of the firm Rouri-Bertrand fils, has been nominated Chevalier of the Legion of Honour.

North of France Exhibition.—An International Exhibition is to be opened at Arras on May 1, 1904, and remain open till the following October. It is under the patronage of the President of the Republic, the honorary president of the Automobile Section being the King of the Belgians. Industrial chemistry is dealt with in Class 9, and Class 13 is devoted to alcohol and its production.

Forging Bank-notes.—The Lyons Court of Assizes has just condemned to ten years' hard labour for forging bank-notes a pharmacist named Charles Amic, who latterly had become a manufacturer of photographic papers. He was also mulcted in a heavy fine. One accomplice, named Emmanuel Ginet, also received the same sentence, but the fine was less. A second accomplice, named Faure, who turned informer, was acquitted.

Self-help as the real remedy for an overcrowded profession is M. Merlhe's idea. There is a healthy diminution in the number of French pharmaceutical apprentices since the "second-class diploma" has been legally abolished. But why not (he asks) go a step further towards limitation? Only let each syndicate of pharmacists draw up and unanimously sign an agreement that they will take no apprentices for a given number of years, and all would benefit thereby. A ten-years' agreement, with exception for the sons and grandsons of pharmacists, is M. Merlhe's proposal.

Cheap Immortality.—It appears that an enterprising Parisian, M. E. Charron by name, is circularising foreign manufacturers and inventors, offering them membership of the "Parisian Inventors' Academy," and inviting them to join its list of "immortals" upon payment of 2*l.* per person. Against this amount they will receive the award of a first-class diploma and the great medal. According to M. Charron the inventor may have this "honourable title" for nothing, but it is the diploma and the gilded medal that cost the money.

In Memory of Pasteur.—Marnes, where the new monument has been unveiled, is indebted to the illustrious chemist, for it was within its boundaries, in the property known as Villeneuve l'Etang, that he installed his laboratories for the study of hydrophobia. It was there he passed the greater part of the summer during his later years, and there he breathed his last. The cost of the monument was almost entirely subscribed by inhabitants of the locality. In connection with the inauguration it is interesting to mention that the number of persons under treatment at the Pasteur Institute in Paris last year was 1,106. Of these only three died, one of whom had not completed the treatment when he succumbed to hydrophobia. Of the patients treated 1,089 were French, nine English, and the remaining eight were Spaniards, Russians, Greeks, Swiss, and Dutch. As anti-rabic institutes now exist at Lille, Marseilles, Montpellier, Lyons, and Bordeaux, persons bitten by dogs, suspected of rabies, in the neighbourhood of those cities are now treated locally, which lessens the pressure at the central institute.

PHARMACY ON THE STAGE.—It was said of a rural play popular in London ("The Squire," in which Mrs. Kendal took the leading *rôle*) that it brought the scent of the hayfield across the footlights. In M. Bataille's dramatic version of Tolstoi's famous novel, "Resurrection," recently produced at the Odéon Theatre, Paris, there is a pharmacy-scene in the fourth act in which one of the *dramatis personæ* is enthusiastic about "the lovely smell of carbolic acid." But, luckily for the audience, the sanitary odour is confined to the stage. This scene does not represent a hospital-ward, as the playbill title, "The Infirmary," led me to expect, but the pharmacy of a Russian prison. As depicted on the stage, this does not inspire confidence, and the staff —whether considered from a moral or intellectual standpoint—makes one shudder. The head of the pharmacy, an active and businesslike little woman, is assisted by two female convicts, whose good behaviour has merited the privilege. But "The Maslowa" (the heroine of the piece) and her younger colleague are both serving their time on poisoning-charges. Possibly some knowledge of toxicology is considered a recommendation in these pharmacies, and I was prepared not to be hypercritical; but their style of doing their work (on the stage) is worse than their moral character. The laboratory-porter is apparently a "free" man—at any rate, he attempts some liberties with the now reformed and virtuous Maslowa. Broken bottles are the result. Enter the doctor, who listens to the porter's hypocritical lament, "I was just percolating quietly, sir, but these sort of women won't leave you alone." The doctor sends the Maslowa back to the cells. Before all this happens we hear No. 6 is waiting for his pectoral syrup, but when the Maslowa and the porter are gone the other pharmacy-assistant, instead of seeing to the detail, commences a long prayer to "Our Lady of Kazan." Then in comes the house-surgeon, who gossips with some visitors, and finally, when the scene ends, No. 6 is still waiting, and no work has been done. Of course it must be all very exaggerated, but "Resurrection" makes one thankful one is never likely to be at the mercy of a Russian prison-pharmacy. In the "Billet de Logement" (a new farcical comedy which has had a long run at the Folies Dramatiques) we are introduced to a French pharmacist—M. Dingois, of Evreux— who is at the *café* with his friend the "Percepteur," and these two pillars of provincial respectability are planning a joyous "evening out," their wives being absent. Mme. Dingois turns up unexpectedly, but being young, attractive, and "patriotic," she is much occupied by the fact that a cavalry-regiment is being billeted in the town, and that the pharmacist will have the honour of entertaining the Colonel. A telegram arrives and summons M. Dingois to Caen "to fetch a consignment of leeches." The wily Percepteur is probably responsible for this extraordinary message, but Mme. Dingois accepts without a murmur her husband's explanation of the necessity of personally conducting the interesting hermaphrodites from Caen to Evreux by the night-train. The next morning she listens with equal equanimity to Dingois' astonishing account of the leeches' escape in the railway-carriage and his energetic but hopeless efforts to secure them again. The presence of the gallant Colonel has apparently spared Mme. Dingois any feeling of loneliness during her husband's absence. The pharmacist, I may add, takes the *rôle* of the funny man, not to say the buffoon, of the play. The piece smacks very strongly of a garrison-town in a light mood, and it was regarding this particular piece that some of the English newspapers reported "that Lord Kitchener had been to see a military play" during his short visit to Paris on his way to India.

Colonial and Foreign News.

DUTCH DRUGGISTS have decided to issue their own trade journal and create a diploma which will be granted to apprentices to mark the end of their instruction.

THE DUTCH GOVERNMENT have granted a sum of 50,000 gulden to establish a museum for commercial and scientific botany in connection with the Botanical Gardens at Buitenzorg, in Batavia.

ETHERS IN AUSTRIA.—The Austrian Minister of Finance has published a by-law stopping the use of duty-free alcohol for the preparation of ethers, except for exportation. In consequence, æther pur. and æther acet. have risen in price by 200 kronen for 100 kilos.

THE SWISS PHARMACOPŒIA COMMISSION are advocating the preparation of compound tinctures by mixing simple ones with extracts, and making syrups with fluid extracts. The latter are to be specially prepared, so as to be soluble in water, contain all the active principles of the drug, and keep at least for one month without change.

MORE REPRESSION.—The Governor of Bohemia has issued a decree forbidding "the wrapping of articles of any kind in printed handbills, &c., of patents of uncertain value, or foreign remedies which are often directly dangerous, thus misleading the public into buying worthless and expensive preparations, the testimonials relying upon their credulity. Such a course being against the aim and purpose of pharmacists, and unworthy of them."

TABLETS BARRED.—The Austrian Government evince high displeasure at medicinal tablets, and have issued a regulation making it necessary to obtain the permission of the Ministry of the Interior before stocking any kind of compressed tablets. An article from a doctor's pen is going the round of the papers, in which "this most modern form of dispensing" is charged with every possible evil, including danger to health, restriction of prescribing, insufficient solubility, decomposition, and facility of error.

MEDICAL PREPARATIONS IN HUNGARY.—U.S. Consul Chester, of Budapest, reports that a new order of the Hungarian Ministry of the Interior has come into force, according to which private persons may import foreign medical preparations by obtaining a licence from the chief officer of the local authority (mayor of city or vice-governor of county), who issues the same upon the advice of the local chief physician. The prices of veterinary medicines have also been fixed by the Hungarian Ministry of Agriculture in an ordinance which came into force this year.

THE ANNUAL MEETING of the German Apotheker Verein is to take place in Munich on August 26 and 27. The most important subjects presented are: "The imposition of an Imperial prescription-tax for the whole German Empire, by which specialities may be sold at an increase of 50 to 100 per cent., according to price"; "To obtain and restrict the use of the Red Cross on white ground solely to pharmacies." An important question to be debated is the pensioning and aid of pharmacists during illness. Several propositions, ranging from State regulation to professional enterprise, are to be brought forward.

THE RED CROSS.—The German Imperial Order of March 22, 1902, prohibiting the indiscriminate use of the red-cross mark for business purposes came into force on July 1. In consequence the red-cross mark has almost everywhere disappeared, says *Phar. Zeit.* Painters were seen painting out the cross on plates or lamps of pharmacies with green or gold coloured paint. The surgical-dressing firms have also been busily employed in effacing the red-cross mark. Some have got over the difficulty by simply painting the cross black. Only very few have availed themselves of the official stamps supplied gratuitously to stick over the marks. These are somewhat larger than letter-stamps, and have a representation of the German eagle on them in light blue on a white ground.

THE CENTRAL PORTUGUESE PHARMACEUTICAL ASSOCIATION have presented to the Government a Bill asking for the revision of the official Pharmacopœia and the addition of formulas of known specialities. Also that no foreign or national speciality should be sold before being submitted to the Superior Council of Public Hygiene and to bear its composition on the label. In this connection every maker would be required to register his formula. The publication of certificates, approvals, and opinions concerning the effects or uses of patent medicines is to be forbidden; and a physician on prescribing such a medicine must not name the maker or owner, nor may the medicines bear fantastic names, unless they refer to components or therapeutic use.

American and Russian Petroleum in Germany.—In the 1902 report of the chemical-examination bureau of Breslau, it is stated that Roumanian petroleum, which had at one time been looked upon as a promising factor in the German markets, has almost disappeared, as well as the Galician product. This leaves the field open to the efforts of the American and the Russian companies. The German buyer, however, is said to look upon the Russian oil with disfavour. The German authorities have for years been increasing their orders to the Russian company, asserting that this oil is cheaper and of a better quality than the American; but private consumers care nothing about the origin of the oil they use, and the merchants in general continue in their refusal to purchase Russian petroleum. Nevertheless, the report shows that this oil has won considerable ground since 1898.

Chinese Camphor.—In a report on the trade of Fuchan, the American Consul mentions that the camphor-forests in the north-west of the province are a monopoly of the Chinese provincial Government, which has established depôts, where all persons are required to bring their camphor. Foreign dealers buy from these depôts, not being permitted to purchase direct from natives in the interior. Camphor may be exported under the transit-pass system, and an effort is being made by certain British tea firms to bring tea down to Fuchan under the same system, which requires only the payment of half duty in addition to the export-duty to foreign countries, thus exempting the foreigner from the payment of the likin duties up country and all the way along the road to Fuchan. This is resisted by the provincial authorities, because they receive all the likin taxes, while the duties paid under the transit-pass system go mostly to the Government through the Imperial Chinese Customs.

Medicines and Soap in China.—The import of foreign medicines into China grows slowly but steadily, says the British Consul at Wuchow, as Chinese practitioners trained in the mission hospitals at Canton and Fatshan are beginning to settle in the province. The best-known medicines in use at the present time are quinine and "tabloids," cod-liver oil and emulsion, iodine and iodide of potassium, sulphate of zinc (for eye-lotions), &c. British soap of a well-known brand sells at 1*s.* per box of three tablets, but, being packed in plain cardboard boxes and but slightly perfumed, it is not so much in demand as the cheaper and highly scented French and German varieties in ornamental covers, which sell well at 6*d.* to 1*s.* per box. A Chinaman, and particularly a Chinawoman, always looks to the box, tin, or bottle, as the case may be, when purchasing foreign goods. There is a large variety of foreign scents on sale in the Wuchow shops; they are chiefly of French and German manufacture, selling at 1*s.* to 1*s.* 6*d.* per bottle; here, again, the article is recommended by the shape and quality of the bottle.

The German Potash-industry.—It is expected that the expert committee appointed by the German potash syndicate a short time ago to consider the conditions under which it would be desirable to prolong the combination will shortly terminate its labours, and negotiations will then be entered into with the individual members in order to settle the amount of their respective allotted output or permissible sales under the new agreement. Instead of establishing a mere association of somewhat elastic limits as in the past, the scheme now under the consideration of the expert committee contemplates the constitution of the syndicate in the form of a company with increased powers to the managers and board of supervision which would be established. The project also proposes the accumulation of a reserve fund for the purpose of acquiring mining-property and shares in potash-mining enterprises, and for compensating losses at any critical period of trade. As the State is largely interested in the potash mines and the existing syndicate it will be somewhat of a novelty for the fiscal authorities to become partners in the proposed new company.

Opium in the Malay States.—The *Selangor Government Gazette* has published "The Opium Enactment-1903," which provides for the regulation of the importation and exportation of opium into and from Selangor. The present enactment, which repeals the Opium Duties Enactment of 1899, will come into force on a date to be fixed by the Resident by notification in the *Gazette*, and it enacts, *inter alia*, that: All opium imported into the State must be accompanied by a written permit to export. No opium, other than opium grown in India and manufactured or purchased by the Government of India, and commonly known as Benares, Malwa, or Patna opium, is to be imported by any person who has not previously obtained a licence from the Resident. No chandu or other cooked preparation of opium may be imported into the State. [*Note.*—The above provisions are not applicable to opium or chandu imported for medical purposes.] It is provided that Indian opium must not be imported in any smaller quantity than one chest of 40 balls. Licences to import opium, other than that grown in India and manufactured or purchased by the Government of India, may be issued by the Resident upon payment of a fee of $50 per annum.

Danish Pharmacy Notes.—A Bill against quacks and secret remedies drawn up by the Council of Health and the Danish Chemists' Association has been introduced in the House of Commons, but it has not met with success, and few only of the members supported the Bill. Other members called the attention of the House to the free sale of those articles in foreign countries and rejected the Bill.—At the election to the House of Commons, which took place on June 16, Mr. Alfred Benzon, the Chairman of the Danish Chemists' Association, lost his seat in the House. He offered himself as a Liberal candidate supported by the socialists. Thus the only representative of pharmacy in the House has been turned out.—By an Act which has received ministerial sanction it will be unlawful after August 1, 1903, to employ pharmaceutical apprentices under the age of eighteen years between 8 p.m. and 6 a.m., with exception of days before holidays and the fourteen days before Christmas. Every chemist must, before he receives a young man as an apprentice, have a certification from a qualified medical practitioner that he is of good health and able to perform his duties.—Dr. Richard Schaefer, teacher of materia medica in the pharmaceutical college in Indianapolis, when passing through Copenhagen took the opportunity of inspecting some of the leading pharmacies in the city.—Mr. Bruzelius, a Swedish pharmacist, has, with the support of the Swedish Chemists' Association, been in Copenhagen inquiring into Danish social pharmaceutical relations. He has aroused the envy of his Danish colleagues by reference to the salaries of Swedish assistants are from 2,200 to 3,000 crowns, and of apprentices 800 to 1,200 crowns yearly.—It may be noted that for entering as a student of pharmacy in Sweden an examination is required, called the "Students' Examination," which takes two years more preparation than the Preliminary, but is not a pharmaceutical examination. A commission has recommended that the remuneration of Swedish pharmacists should be raised.

East Indian News.

Vanilla-cultivation promises to be a profitable investment in Coorg, Mysore, ere long. A planter there, after much trouble and great perseverance, has succeeded in producing pods for which he has obtained excellent prices.

Selling Cocaine.—The Calcutta Excise Department on June 27 charged Babu Upendranath Daw with selling four 1-gram bottles of cocaine and with having in possession 102 oz. of cocaine without a licence. The accused was charged under Sections 53 and 61 *a* of the Excise Act of 1878. He ostensibly carried on business as a manufacturer of chaulmoogra oil at his premises in Kali Prasad Dutt's Street, in Jorasanko, but had been also systematically carrying on an illicit trade in cocaine manufactured in England. After several witnesses had been examined, the case was adjourned.

American Notes.

To Free the College.—To the subscription list circulated among the druggists of New York to raise the debt which has been hanging over the College of Pharmacy several of the larger drug merchants of the city have signified a willingness to subscribe $1,000 each, and it is believed that a number of others will also contribute a like amount.

Bismuth-production. — The reports by Dr. Joseph Struthers on the production of bismuth, graphite, and antimony in 1902, just published by the United States Geological Survey, show that the production of bismuth ore during 1902 amounted to 37·5 short tons, as compared with 318·6 tons in 1901. The entire output last year was from the Ballard mine, Colorado, none of it being sold during the year. The imports of metallic bismuth into the United States in 1902 were 190,837 lbs., valued at $213,704, as compared with 165,182 lbs., valued at $239,061, in 1901.

Tobacco Experiments. — The American Government, through its chemist, Professor Wiley, will begin experiments in the autumn with eighteen men to determine the effects of tobacco on the heart, the lungs, the digestive organs, and the human system generally. During the first month of the experiments the men will not use tobacco in any form, then they will be divided into three squads—viz., smokers, chewers, and snuffers. They will begin with a gradual use of tobacco, and finally be permitted to indulge to the fullest extent. The smokers will have all kinds of cigars, cigarettes, and pipes, the chewers all kinds of chewing-tobacco, and the snuffers will be equally well treated. During the last month of the experiments the men will have no tobacco. Professor Wiley has had many applications from persons desiring to be experimental subjects. The recent Government experiments with twelve men who took borax and boracic acid in their food are said to show that most of the subjects suffered no ill effects. The borax experiments lasted seven months.

In China Town, N.Y.—In a recent issue of the *Pharmaceutical Era* there is an entertaining account of a visit to the pharmacy of Munn Woey Chun in Pell Street, the Chinese quarter of New York City. Mr. Chun's pharmacy appears to be a combination of American and Chinese, for it contains a soda-fountain, and an American lady doctor (who has married a Chinaman) consults there. Mr. Chun keeps but one patent medicine—Salvation Oil, a Chinese proprietary that sells well in the district. Toilet-soaps are kept in profusion, and the general stock is made up of such simple drugs as the lady consultant uses in prescriptions and a few other staples, like vaseline, court-plaster, and cough-remedies. Mr. Chun said that the Chinese make strange patients. One gets ill and calls in a doctor. In half an hour he sends for another, and then for another, and so on until he has had five or six. If he takes any—and he may not—of the various mixtures prescribed, it is sure to be the one that pleases his palate the best. In Mr. Chun's own land there are no State or municipal regulations regarding pharmacy. Neither licences nor diplomas are required. Poisonous drugs are never marked differently from any other. Prescriptions belong to the patient, who may take them away or leave them as he wishes. The preparations are mostly of English make. Quinine and tonics are largely used, and, of course, ginseng. Every Chinese merchant, however ignorant of pharmacy, may sell drugs if he pays the "likin" tax. A typical prescription calls for "a decoction made of ginseng, apricot kernels, and seven other medicines." What the seven other medicines shall be is left to the discretion of the druggist. For scalds, burns, and tumours an ointment "from fifteen poppy-leaves" is recommended. The same ointment mixed with sesame oil and water is taken internally for smallpox and fever. There are more than 300 herbs in the existing Pharmacopœia, but few of them are important or known to Western pharmacists. Opium is never prescribed or used medicinally. Digitalis is common, though unused. Mineral drugs, except mercury, are never prescribed.

A CHINESE PHARMACIST AND HIS SONS.

"The Queenslander" recently had a photograph of Quong See Tick, said to be a chemist, who had arrived in Cairns from Port Darwin. He has five wives and twenty children altogether, but he left two wives and six children in China. The youngest child was born at Cairns in February. He was at one time a wealthy merchant of Port Darwin, but he is now a seller of physic and lottery-tickets. *The Chemist and Druggist of Australasia* has got a photograph of Quong See and the male portion of his family, and Mr. T. Kelly, of Cairns, tells our offshoot that from a pharmaceutical point of view Mr. Quong See Tick's speciality is curing venereal trouble for 1*l.*, but it generally runs into more than that by the time he is finished. A couple who had been under his care told Mr. Kelly that he mixes up some vile decoction of herbs, which they have to drink at his establishment. This decoction is guaranteed to take a twist out of the strongest stomach. He evidently does not cater for children, as a young Chinese girl went to Mr. Kelly and wanted a big bottle of cough-medicine for Quong See Tick's sixteen children. On asking her why the father did not fix them up, she said he did not understand children—a rather astonishing confession for the father of such a family. But the family is mixed up. We reckon that a total of twenty, six of them in China, leaves fourteen in Port Darwin. Where have these other two come from?

Society of Chemical Industry.

ANNUAL MEETING AT BRADFORD.

OUR report last week took the proceedings up to Wednesday night. On Thursday the day was occupied with excursions to various "mills," principally concerned with the textile industry. The following are typical examples of how the visitors spent the day:

The world-renowned mills of Saltaire, where combing, spinning, manufacturing, and dyeing of wool, mohair, and alpaca have been carried on for a hundred years, were visited, under the leadership of Mr. G. W. Slatter, by a limited party, which was joined by Sir William Ramsay. The various institutions of the pioneer model village were pointed out on the way to the works. As it was impossible to see everything in the short time at disposal, Mr. Slatter courteously explained those points in which the majority seemed interested. One of these was the

WATER-SOFTENING

arrangements, which here are on an enormous scale. Large quantities of water are required, not only for steam-raising, but for washing, scouring, and dyeing. The apparatus—a modification of Desrumaux's—consists of a capacious and tall circular cistern, within which there is another narrow central cistern reaching from top to bottom, and which communicates at the bottom with the annular outer space. The hard water is pumped from the River Aire to the top of a preliminary tank, where it is automatically mixed with a due proportion of lime-water (made in 50,000-gal. batches), to remove temporary hardness caused by calcium carbonate, and is admitted into the central cistern above referred to, which is also automatically fed with the requisite quantity of caustic-soda solution, to remove the permanent hardness caused by calcium and magnesium sulphates, &c. Thus impregnated, and plainly showing the action of the chemicals by its milkiness, the water passes to the bottom of the narrow central cistern, which is, perhaps, 4 feet in diameter, and has to rise to the top by the wide annular space which forms the outer cistern. Any substances originally mechanically suspended in the water, together with the precipitate formed by the chemical additions, are largely deposited at the bottom of the cistern, where provision is made for their periodical removal by appropriate valves. Any solid particles sufficiently fine to be brought up by the softened water are efficiently kept back by a filter of wood-shavings placed on a perforated shelf at the top part of the outer cistern. As it takes twenty-four hours for the water to pass through the apparatus, very little of the solid matter can fail to be kept back. The water is delivered perfectly clear and soft by a wide channel at the top into a store-cistern holding many thousand gallons. It should be noted that this wide channel serves an important purpose, for it is found that if the water is softened below about two degrees of hardness it shows some alkalinity, undesirable for various uses, which exposure to the air in the wide channel completely removes.

Indigo-dyeing was also an operation that Mr. Slatter explained at some length. It appears that, although experiments have been made with synthetic indigo, they still find that the natural product is preferable, and this is being largely used at these mills.

On the motion of Sir William Ramsay, hearty thanks were accorded to Mr. James Roberts, the managing director of Messrs. Sir Titus Salt, Bart., Sons & Co. (Limited), for permission to see over the works, and to Mr. Slatter, their chemist, for his kind explanations.

MERCERISING.

A visit was paid in the afternoon to the works of Messrs. Wm. North & Co. (Limited), where a large party were shown the processes of cotton-warp dyeing, sizing, and mercerising. The greatest interest seemed to attach to the last-mentioned process, which, by the simple passing of the cotton fibre, stretched tight, through a bath of caustic-soda solution, gives it a lustre like silk. If the cotton threads are not held tight during the operation of mercerising they shrink from 25 to 50 per cent., according to circumstances, and do not acquire lustre, whereas, if held tight, the shrinkage is only about 2 per cent.

Those who imagine that the aniline colours have completely superseded the old dyes have only to see the row of large logwood-extractors in operation here to be convinced of the contrary.

Refreshments were partaken of after seeing over the works, and, in his acknowledgment of the thanks expressed on behalf of the members by Mr. Eustace Carey and Mr. A. H. Allen, Mr. North said that he regretted the Society could not have witnessed the activity of a few months ago, which has been checked by the cotton corner in America.

CHEMICAL FIRE-ENGINES.

The new City fire-brigade station was also visited, where a special turn-out of the brigade was witnessed by a large company. In twenty-two seconds from the time of giving the alarm the engines were away *en route* to the supposed fire. It is quite believable that this was longer than the normal time required, as the presence of so many people in the building would prevent expedition. Twelve seconds is said to be the average time necessary.

It was interesting to learn that the chemical fire-engine, worked by means of sodium bicarbonate and sulphuric acid, is sufficient to put out some 65 per cent. of the fires that occur. This engine, which is always sent first, has two generators, which may be worked singly or in conjunction, and eject a mixture containing CO_2 at a great pressure—practically aërated water.

THE ANNUAL DINNER

was held in the evening at the Midland Hotel. Mr. Ivan Levinstein presided, and amongst those present were the Mayor and Mayoress (Alderman and Mrs. David Wade), Sir William Ramsay, K.C.B., F.R.S. (President-elect), Dr. Edward Divers (Emeritus Professor of Chemistry at the University of Tokio, Japan), Professor Edward Hart (Lafayette College), Mr. E. K. Gray (President of the Institute of Electrical Engineers), Mr. Thomas Fairley (President of the Society of Public Analysts), Mr. B. C. Acton (New Zealand Department of Agriculture), Professor W. R. Lang (Chairman of the Canadian Section), Mr. W. F. Reid (Chairman of the London Section), Mr. J. E. Bedford (Chairman of the Yorkshire Section), Mr. J. Carter Bell (Chairman of the Manchester Section), Mr. F. Tate (Chairman of the Liverpool Section), Dr. J. T. Dunn (Chairman of the Newcastle Section), Mr. Thos. Tyrer, Mr. Watson Smith, Mr. S. Hall (Treasurer), Mr. Charles G. Cresswell (General Secretary), Mr. W. M. Gardner (Local Secretary), and many ladies. Numerous letters of apology were announced, including one from the President of the Pharmaceutical Society.

THE TOASTS.

The Mayor of Bradford, in proposing "The Society of Chemical Industry," took Mr. Levinstein to task for certain passages in his speech which seemed to advocate protective tariffs. It was prophesied that the grass would grow green in the streets of Bradford if the American trade was lost. The American trade was practically lost, but there is no grass to be seen in the streets of Bradford. (Hear, hear.) Looking round Bradford he defied any man to find the poor. There were not workpeople enough to run all the machinery. Great strides had been made in Bradford. The population had increased to 280,000, and the people were all better fed, better clothed, and better housed than they were fifty years ago. He did not think there was any dire distress at all in the city, and, personally, he had very great hopes of the future notwithstanding all the Protectionist ideas that were prevalent at the present time. (Applause.)

The President responded.

Next, it fell to Sir William Ramsay to propose the toast of "Applied Science," the feature of his speech being the announcement that he had discovered that

RADIUM GIVES OFF HELIUM.

This is how the announcement was made:

> For some time two very distinguished young scientists belonging to Canada—Professor Rutherford, of Montreal, and Mr. Soddy, who is now working in my laboratory—have been investigating the properties of those mysterious elements which had the power of discharging an electroscope when they were brought near it. This property was first discovered in uranium by M. Becquerel, of Paris, and not long afterwards Madame Curie

discovered the wonderful element, radium. Messrs. Rutherford and Soddy discovered that thorium, an element not far removed from radium and uranium, gives off an emanation, or gas—a substance that can be moved from place to place, which can be condensed by cooling at a sufficiently low temperature, but which is most remarkable as a substance which discharges a loaded electroscope and also as a substance which shines in the dark. They pointed out that radium gives out a similar emanation or gas continuously, that any salt of radium—radium bromide is what is generally used—but any salt of radium, if allowed to stand for a while, accumulates a further quantity of gas, which can be removed with a pump or by washing it out with another gas. This very curious substance loses its properties on standing. If it is allowed to remain for four days it has parted with half its power to discharge an electroscope, and becomes, if looked at in the dark—as far as one can judge by the eye—half as luminous. And as time went on it loses its power of discharging electricity, and also its luminosity, until at length there is nothing left. There appears to be no residue as far as one can tell. Mr. Soddy has done me the honour of coming and working in my laboratory, and as I have had some little experience in dealing with small quantities of gas, we laid our heads together, and contrived to examine this emanation or gas given off by radium. I may tell those who do not know that radium is very expensive, because it is a very rare substance, and that 25*l.* will buy a very small quantity indeed—about 3 gr. We managed to scrape together the needful—(laughter)—and invested in as much radium as we could get—all there was in the market at the moment. Having examined this gas, we found, to our astonishment, the other day that the emanation contains a quantity of helium, a light constituent of the atmosphere. I do not wish to imply that the emanation is helium, for it is not. The gas was first passed through a tube cooled with liquid air, in which the emanation stays behind, being condensed at that low temperature. But the other gas passes through this cold tube, and when collected in a microscopic Pluecker tube—what we call a vacuum-tube—it shows undoubtedly the whole spectrum of helium. (Applause.) It is impossible to forecast what this implies, but you must remember that the radium bromide which we have obtained, prepared, no doubt, by the same process which the Curies used—namely, the decomposition of pitchblende, a uranium mineral, with precipitation of barium by means of sulphuric acid and with it radium, and separation of radium from barium by fractional crystallisation—that this radium obtained from pitchblende can hardly be supposed to have retained any helium through all those manifold operations. And it would follow that the helium must be generated from the radium or from the gas—the emanation—which the radium gives off. At present I am as much in the dark about it as anyone. I merely chronicle the fact that there is undoubtedly a production of helium continuously from radium. (Applause.)

Sir William added that it is useless to speculate further. He thought it better if one had ideas on the subject to allow them to mature, and to perfect them by further experiment before indulging in vain conjecture. Returning to his toast, he said it might be held that in future this branch of science would meet with a practical application. What might take place, of course, could not be forecasted. He had recently calculated that a rich man, who could afford a luxury, could furnish an efficient illumination for a good-sized room—it might be permanent, too; it would last out his time, at any rate, some three or four thousand years—(laughter)—at a cost of about 500*l.*—if he could get the radium.

Mr. W. F. Reid responded to the toast; after which "The Trade and Industries of the District" was proposed by Mr. Thomas Tyrer, and responded to by Mr. W. E. B. Priestley.

Professor E. Hart, of New York, proposed "The Yorkshire Section" in genial terms, and other toasts followed, the proceedings being wound up by the company drinking the health of the President of the United States.

The following is the communication which Sir William Ramsay and Mr. Soddy made to *Nature* of July 16 on the subject of

Gases Occluded by Radium Bromide.

Rutherford and Soddy (*Phil. Mag.*, 1902, page 582; 1903, pages 453 and 579) pointed out that the almost invariable presence of helium in minerals containing uranium indicated that that gas might be one of the ultimate products of the disintegration of the radio-elements. Rutherford, moreover, determined the mass of the projected particle which constitutes the "α-ray" of radium (*Phil. Mag.*, 1903, page 177) to be approximately twice as great as that of the hydrogen atom, an observation which points in the same direction. These α-particles are readily absorbed by solids, and should accumulate in the solid salts of radium and in the radio-active minerals.

We have been engaged for some months in examining the spectrum of the "radio-active emanation" from radium, and during this work the opportunity presented itself of examining the gases occluded by 20 mgrams. of radium bromide which had been kept for some time in the solid state. These gases, which are continuously generated, have already been partially examined by their discoverer, Giesel, and by Bodländer (*Ber. Deutsch. Chem. Ges.*, 36, page 347), and found to consist mainly of hydrogen and some oxygen. We have found that, after removing hydrogen and oxygen from the gases evolved from 20 mgrams. of radium bromide, the spectrum showed the presence of carbon dioxide. On freezing out the carbon dioxide, and with it, a large proportion of the radium "emanation," the residue gave unmistakably the D_3 line of helium. This was confirmed by sealing off the tube, and comparing its spectrum with that of a helium tube. The coincidence of the two lines may be taken to be at least within one-tenth of the distance between D_1 and D_2, or, say, 0·5 of an Ångström unit.

This observation, if confirmed, substantiates the theory already mentioned, and brings ordinary methods to bear on the changes occurring in radio-active bodies.

William Ramsay.
July 10. Frederick Soddy.

P.S. (July 13).—We have repeated the experiment with 30 mgrams. of fresh radium bromide, kindly placed at our disposal by Professor Rutherford, which had probably been kept for several months in the solid state. Entirely new apparatus was constructed for the purpose, and better precautions were taken to exclude from the spectrum-tube carbon dioxide and the emanation. The spectrum was practically that of pure helium, with the addition of two new lines. The lines identified are:

Red	6677	Green-blue ...	4932
Yellow (D_3) ...	5876	Blue	4713
Green	5016	Violet	4472

The additional lines are one in the red and one in the green these we have been unable to identify.

Personalities.

Mr. John Tweedy, F.R.C.S., of Harley Street, has been appointed to succeed Sir Henry G. Howse as President of the Royal College of Surgeons.

At the visit of the Prince and Princess of Wales to Truro last week, Mr. W. H. Bücher, pharmaceutical chemist, and Mr. Benjamin Carter, pharmaceutical chemist, were members of the general committee.

Mr. Robert Fred. Swinn, chemist and druggist, son of Mr. Chas. Swinn, St. Mary's Pharmacy, Hulme, has obtained a first class at the Manchester School of Technology in the principles of optics and sight-testing.

Dr. W. H. Martindale, 10 New Cavendish Street, W., has been interviewed by a *Sunday Chronicle* "Special Commissioner," with the result that an interesting two columns appears in that journal under the triple heading, "The Patent Pill. Revolutions in Treatment. The Modern Medicine-man's Marvels."

Mr. Merwan A. J. Noble, of Bombay, a Parsee gentleman, who is well known to the drug-trade in India, is now on a visit to England. While here Mr. Merwan Noble is to make inquiry regarding the pharmaceutical training in this country of Indian-born youths. He sees no reason why what native gentlemen have done in law and medicine in English and Scotch Universities should not also be done in pharmacy, and he believes there is a big future for Indians who have obtained the Minor qualification.

At a meeting of the Chorlton-on-Medlock Board of Guardians on July 17 it was unanimously resolved to petition the Chancellor of the Duchy of the County Palatine to place on the Commission of the Peace for the City of Manchester the name of William Ramsden, Chairman of the Board. Mr. Ramsden is a chemist and druggist, and carries on business at Fallowfield. This is the second year of his chairmanship of the Chorlton Board of Guardians, the largest and most important of the local unions.

Young Doctor: "Did you diagnose his case as appendicitis or merely the cramps?" Old Doctor: "Cramps. He didn't have money enough for appendicitis."

Pharmaceutical Examinations.

MINOR EXAMINATION.

WE have received from the Registrar of the Pharmaceutical Society of Great Britain the following list of candidates who were granted certificates for registration as chemists and druggists at the recent examination held in London:

Bedell, Margaret I., Sandgate
Beeham, Reginald S., Oundle
Beesley, William, Lancaster
Bickford, John, Exmouth
Binns, John E., Sowerby Bridge
Caws, Hilda B., Sea View
Chalmers, Edward, Willesden
Clarke, Arthur S., Malvern
Corkill, William S., Ramsey, I.M.
Dale, William A., Marske
Davies, Charles A., Mountain Ash
Davies, Frank H., March
Davies, Thomas H., Crugybar
Davies, Thomas W., Caergwrle
Douch, Walter, Southborough
Downing, Thomas A., Macclesfield
Eaton, Edgar Smith, Swinton
Edwards, Joseph H., St. Asaph
Ellison, Charles K., Skipton
Evans, Charles H., Holborn
Findlay, Robert M., Kilmarnock
Fortnam, Walter J., Willenhall
Fouracre, Robert, London
Fowler, William H., Southborough
Gardam, William J., Ripon
Gibson, George W., Douglas
Gilliatt, Alice, Boston
Hall, Edgar, Burnley
Hall, William D., Morton
Hamlin, Hourston, Dartford
Hebditch, John R., Selby
Henshaw, John L., Alsager
Hepworth, Raymond, Barnsley
Hill, Wilfrid, Ashton-in-Makerfield
Hirst, Joseph L., Slaithwaite
Hothershall, Robert H., Gunnersbury
Huck, John R., Darlington
Inman, George, Manchester
James, Alexander, London
Jones, John Ellis, Penycae
Jones, T. A., Llandrindod Wells
Keene, Hedley H., Bournemouth
King, Katherine M., Richmond, Yorks
Lewis, John Rees, Ferndale
Lister, Willie, Bingley
Llewellyn, Algernon D., Ystrad
Lomax, Leonard, Holmfirth
Macdonald, Charles A., Elgin
Mansell, Thomas C., Wandsworth
Maudling, Walter H., York
Mills, James Q., Rochdale
Mogg, Ernest H., Wells, Som.
Morgan, Percy, Ryde
Morley, Cecil J., Nottingham
Mosley, Wilkinson, Driffield
Newill, Ethel C., Birmingham
Oliver, John J., Liverpool
Paine, Charles B., Newport
Penney, Harry C., Chichester
Pickles, Walter H., Liverpool
Pike, Herbert W., Andover
Privett, John W., London
Punch, Herbert S., Sedbergh
Raine, Frank H., Darwen
Rees, Alcwyn, St. Clears
Richardson, Joseph, Louth
Riddle, William, Belliugham
Salter, Leonard Eli, Worthing
Sawyer, Albert E., Wrentham
Seymour, Joseph J., Cambridge
Shepherd, Fredk. W., Nottingham
Short, Latimer J., Bristol
Smith, Edgar, Easingwold
Smith, Herbert J., London
Stancombe, Sydney J., Plymouth
Storey, Richard, Liverpool
Sweetman, Robert V., Ludlow
Tunnicliff, George W., Rugeley
Wade, Alfred, Harlesden
Walker, Frederick G. C., Kendal
Watkins, Thomas B., Croydon
Watt, George G, Hingham
Webb, James T., Dukinfield
Webster, Digby, Chester
West, Tom E., Keighley
Whitley, William O, Rhyl
Wiles, Henry, Grayshott
Willoughby, George E, Camborne
Wilson, Robert, Liverpool
Wilson, Wm. S., Stratford-on-Avon
Withers, Arnold B., Faversham
Wood, Charles E., Rock Ferry
Wright, Ernest J., Witney
Wyse, Monckton H., Southport
Yeoman, Cyril, Hartlepool

The Board examined 325 minor candidates, of whom 230 failed. The Edinburgh Board examined 143 candidates, and 97 of them failed.

Pharmaceutical Society of Ireland.

THE subjoined are the questions given in the July examinations:

EXAMINATION FOR LICENCE.

MATERIA MEDICA AND BOTANY.

Examiner: Mr. Jas. Guiler, M.P.S.I.

[*Time allowed—Two hours.*]

MATERIA MEDICA.

1. What are the principal alkaloids obtained from opium? State process for extraction and separation. Give percentage of alkaloid in opium used for official purposes.

2. Give botanical source, N.O., and distinctive characters of coca-leaves, pyrethrum-root, calumba-root, and belladonna-leaves.

3. Oleum morrhuæ: state what you know of its preparation and composition. Give tests, and how it may be distinguished from seal oil.

4. From what essential oils is salicylic acid obtained? How would you detect organic impurities in the acid?

5. What is—cotton-wool, juniper-tar oil, eserine, gamboge, frankincense, indiarubber, scopolamine, galbanum? State source and N.O.

BOTANY.

6. What is meant by phanerogams and cryptogams? Describe how the latter are reproduced.

7. What are cystoliths? Mention any official plant in which they occur and N.O.

8. Contrast the structure, position, and placentation of the ovary in the *Labiatæ*, *Leguminosæ*, and *Umbelliferæ*.

GENERAL AND PHARMACEUTICAL CHEMISTRY.

Examiner: Mr. Forbes Watson, B.Sc., F.I.C.

(*Time—One and a half hour.*)

1. Write equations for the reactions which take place when solutions of the following substances are mixed:

Potassium iodide and chlorine.
Sodium thiosulphate and iodine.
Sodium sulphite and iodine.
Lead chloride and ammonia.

2. What impurities is ether likely to contain, and how would you test for them?

3. Describe fully the preparation of compound spirit of ether.

4. What is the chemical composition of the following substances: Marble, quartz, aragonite, Iceland spar, asbestos, meerschaum?

5. What is meant by "optical activity"? Name three optically active substances.

6. How would you prepare the following substances in as pure a state as possible: Phenol, salicylic acid, calcium carbonate, lead oxide?

PHARMACY.

Examiner: Mr. J. Michie.

[*Time allowed—Two hours.*]

1. In order to make syrup of glucose, how would you prepare the glucose?

2. Write out the following prescription in full Latin, and give literal translation of directions:

℞ Quin. sulph. ... ... gr. xx.
Acid. sulph. dil. ... ... ʒiss.
Liq strychn. hyd. ... ... ʒj.
Syrup. aromat. ... ... ʒvj.
Iuf. calumb. ad ... ... ℥viij.

Ft. mist.

Capt. coch. j. ampl. ter. quaterve in die antecib. hora.

3. How are the following prepared?—

Phosphorus pill.
Solution of iron acetate.
Purified ether.
Syrup of red poppy.
Compound iron mixture.
Dry extract of euonymus.

4. State how the fruit basis for official lozenges is prepared. Name the lozenges made on this base, and give strength of each.

5. What precautions are necessary when selling by retail?—

Tartar emetic.
Biniodide of mercury.
White precipitate.
Extract of belladonna.

ASSISTANT TO PHARMACEUTICAL CHEMIST.

Examiner: Mr. Henry O'Connor, M.P.S.I.

1. Name the constituents, and state the strength and dose of each of the following:

Inject. morphinæ bypod.
Vinum ipecacuanhæ
Glycerinum pepsini
Pulvis opii comp.
Tinct. guaiaci ammon.
Pil. phosphori
Liq. atropinæ sulph.
Decoct. aloes comp.
Confec. sulphuris
Infus. sennæ

2. Enumerate the official salts of lead, and give the dose of any administered internally.

3. Chrysarobin: name its source and state how it is obtained.

4. The following are B.P. synonyms. Name the preparations which they represent: (*a*) Plummer's pill, (*b*) Goulard's extract, (*c*) extract rhamni purshiani, (*d*) juniper-tar oil, (*e*) elixir of vitriol, (*f*) liver of sulphur.

5. Explain the terms Deliquescent, Efflorescent, and Hygroscopic as applied to salts, and give B.P. examples of each.

REGISTERED DRUGGIST EXAMINATION.

(Dublin.)

1. Find the product of ·00172 and ·0101, and divide the answer by ·43.
2. Find the simple interest on 810*l.* for 11 months at $2\frac{2}{3}$ per cent.
3. How much in the £ can a bankrupt pay if his debts are 13,901*l.* 6*s.* 8*d.* and his assets 10,252*l.* 4*s.* 8*d.*?
4. A solution of corrosive sublimate contains $\frac{1}{16}$ gr. in each teaspoonful: how much will $1\frac{1}{2}$ pint contain?
5. Give the English equivalent of a gram, and find the number of grams in a ton.
6. Give the appearance and properties by which the following preparations may be recognised: Syrup of senna, glycerin of tannic acid, chalk-mixture, compound rhubarb pill.
7. Under what conditions are the following sold: Tartar emetic, ether, tincture of aconite, chloroform-liniment, cantharides, ergot, mercuric chloride?
8. Write an essay on "Motor-racing."

(Belfast.)

1. Divide the sum of 7·12306 and 1·01758 by their difference.
2. Find the simple interest on 750*l.* from March 1 to October 6 at 5 per cent.
3. A man insures his life for 1,750*l.* What is the annual premium at 2*l.* 16*s.* 2*d.* per cent.?
4. A pill contains $\frac{1}{4}$ gr. of extract of nux vomica and $\frac{3}{4}$ gr. of aloin. Calculate the quantity of each required to make 10 gross.
5. Give the English equivalent of a metre, and find the number of metres in ten miles.
6. Name four preparations containing opium, and give the appearance and properties by which each may be recognised.
7. State the regulations applying to the first and second parts of the Sale of Poisons Act, and name six poisons under each part.
8. Write an essay on "Honesty is the best policy."

Federation of Local Pharmaceutical Associations.

At the annual meeting to be held in the Royal Hotel, Bristol, on Friday, July 31, at 9.45 A.M. punctually (Mr. W. L. Currie in the chair), the committee will submit the following

Annual Report.

The Executive Committee have pleasure in presenting a short *résumé* of work accomplished in the name of the Federation during the year just closed.

Matters pharmaceutical have been more than usually interesting. The issue of the report of the Departmental Committee on Poisons, and the introduction of a Pharmacy Bill into the House of Commons, together with the present agitation in connection with the stamping of articles of medicinal use, have each in turn kept local associations busy, and have furnished ample material for discussion at meetings, and for active work outside.

A reprint of the report of last annual meeting containing the "Test-case" discussion was sent to all local associations, with a request that they should, in the light of that report, consider the advisability of affirming the resolution passed at that meeting.

Responses to this request were almost unanimous in the opinion that it was not advisable to reopen the matter.

The Executive Committee met twice (in London) during the year, all the members being present, and in addition, by frequent correspondence, have kept closely in touch with each other and with the work being done.

Special attention, as in past years, has been devoted to the formation of new associations, the reconstruction of old and weakly bodies, and the general perfecting of local organisation, with a view to securing effective and concerted action when necessary.

In furtherance of these aims the Chairman visited Bradford the Secretary, Huddersfield, Middlesborough, West Hartlepool &c., whilst other members of the committee have used their bes endeavours to promote local activity in various ways.

As an outcome of divisional meetings held by the Registrar of the Pharmaceutical Society, the Secretary has been enabled to effectively co-operate with Divisional Secretaries and others, with the result that a number of new associations have been formed, whilst several which were in a languishing condition have been resuscitated.

Assistance given in this connection has been duly acknowledged by the officials of the Pharmaceutical Society, whilst the good work done by the Chairman of the Executive Committee has been recognised in the co-option of Mr. W. L. Currie to the vacant seat on the Council.

The Executive Committee wish to place on record the gratification they feel at the attitude of the Society's Council and officials towards local associations, and hope that this attitude will be even more marked in the future. They are of opinion that the hands of the Council will be greatly strengthened by frank co-operation with local associations, more especially in matters in which it is desirable that the good offices of members of Parliament should be enlisted.

Circulars have been sent out to local associations with reference to the education of members of Parliament in connection with Poisons Report and Pharmacy Bill, and the committee are satisfied that these circulars were of considerable value, as the results will show when these matters come up for consideration in the House of Commons.

A letter sent out by the Secretary, previous to the Pharmaceutical Council election in May, asking local associations to meet and consider the important question of selection of candidates, and urging them to see that, as far as possible, members should record their votes, was productive of good results, over five hundred more votes being recorded than at previous election. There was no special feature in connection with the election which would otherwise account for this increase. The committee hope that on future occasions, when more time is available, the large percentage of non-voters may be considerably reduced.

A circular sent out to local associations suggesting that at least once a year (in addition to any individual subscriptions) each association should, at a convenient social gathering, make a collection on behalf of the Benevolent Fund of the Pharmaceutical Society, met with very gratifying response, and the treasurer of the fund has stated that a considerable sum has been raised by these collections.

Suggestions having been received from several sources indicative of a wish to have the constitution and rules of the Federation placed on a wider basis, steps were taken to allow discussion of this, and as a result several resolutions appear in another place for consideration.

In one of these resolutions regret is expressed at the paucity of communications emanating from the Federation during the past two years. The Executive Committee beg to point out that the duty of initiating work rests with individual associations, and that the Federation is simply the organised medium of inter-communication between its constituent units.

Ten additions to the list of Federated Associations have been made during the year—viz., Aberdeenshire (East), Dover, Hartlepools, Kent (North), Leeds, Leicester, London, Peterborough, Sussex (East), and West Ham—whilst several others, newly formed, are at present in correspondence with reference to affiliation. One association (Wrexham) has dropped out, the organisation being now extinct.

The Treasurer's Statement

shows receipts of 23*l.* 13*s.* 10*d.* from subscriptions, and expenditure amounting to 27*l.* 17*s.* 8*d.*, comprising stationery, &c., 10*l.* 17*s.* 5*d.*; railway-fares, hire of rooms, &c., 14*l.* 9*s.* 8*d.*; and postages and telegrams, 3*l.* 0*s.* 7*d.*

Next Week's Programme.

The more important items of business for the annual meeting are:

Alteration of Rule 7 so that it may read:

That the annual meeting be open to all members of the British Pharmaceutical Conference, but only delegates representing subscribing associations be entitled to vote in the appointment of officers and Executive Committee or upon any question affecting the constitution and rules.

Motion as to Rule 3:

This Association hopes that it will be found possible for the Federation to take a keener interest in the objects set forth in this rule, and regrets the paucity of communications from the Federation during the last two years on the leading questions of the times, and hopes that means will be found for encouraging more inter-communication between different associations through the agency of the Federation.

Also as to Rule 4:

That, in view of the increased number of associations, the Executive be increased from five to seven.

Also as to Rule 5:

This Association considers there should be more affinity between Rule 2 and Rule 5, and suggests that the subscription for each association should vary according to the number of delegates they are entitled to send, and that the subscription be 7*s.* 6*d.* for each delegate they are entitled to have.

Also as to Rule 7:

That either only delegates be admitted to annual meeting or that only delegates be allowed to *speak and vote* on matters before the meeting, as this Association considers too much liberty is given to outsiders at the general meetings.

The last four are to be moved on behalf of the Grimsby Association.

Mr. J. F. Tocher, F.I.C. (Peterhead), paper on "Territorial Representation," practically treated and illustrated by numerous maps, &c.

Mr. John Humphrey (London), paper on "Liability to Medicine-stamp Duty."

Huddersfield Association will move:

That, before each election of the Pharmaceutical Council, the Executive of the Federation of Local Pharmaceutical Associations shall send to each affiliated association a list of candidates for election, stating against each name whether or not the said candidate supports and adopts the principle of protection of prices.

Burnley Association will move:

That this meeting do take into consideration the advisability of recommending the Pharmaceutical Council to reduce the annual subscription to 10*s.* 6*d.*, as we are of opinion that thereby its membership would not only be materially increased, but also have much greater weight and influence.

Marriages.

BROWN—SOPPET.—On July 2, at All Saints' Church, Northallerton, by the Rev. S. McKinnon Thompson, Charles Brown, pharmaceutical chemist, 161 Bury New Road, Manchester, second son of the late Dr. Henry Brown, Northallerton, to Marie Inman, second daughter of Mr. and Mrs. Soppet, Northallerton.

TINGEY—WILLS.—On July 16, at the Parish Church, Croydon, by the Rev. H. Scott Chignell, William Charles Tingey, chemist, to Edith Mabel Wills, second daughter of Mr. G. S. V. Wills, principal of the Westminster College of Chemistry and Pharmacy, London.

TATE—SAKER.—On July 18, at All Saints' Church, Hertford, Anthony Tate, chemist and druggist, Broom Park, Durham, to Madge, second daughter of Mr. William Saker, Norwood, S.E.

Silver Wedding.

CATTELL—WINDRIDGE.—On July 17, 1878, John Thomas Cattell, chemist, Birmingham, to Mary Elizabeth Windridge, of Coventry.

Deaths.

BAKER.—At Headingley, Leeds, on July 7, Mr. Oliver Baker, chemist and druggist, aged twenty-four.

BARCLAY.—On July 19, suddenly after a short illness, at Endelberg, Switzerland, Mr. John Barclay, B.Sc., pharmaceutical chemist, of Osmotherly Cottage, Blackwell, eldest son of Mr. Thomas Barclay, Birmingham, and a director of Southall Brothers & Barclay (Limited), aged thirty-six. The painfully sudden death of one of our foremost young English pharmacists comes as a shock to all those who knew him, and especially to Birmingham pharmacists. The last time we saw Mr. Barclay he was the picture of good health, and letters we had received from him quite recently were as cheery and energetic as usual, but it is the fact that his condition gave his friends some anxiety, and he had been travelling a good deal, in the hope of throwing off the trouble which afflicted him. It was while on a walking-tour in Switzerland with some friends that he died. John Barclay combined the two essentials for the younger race of British manufacturing pharmacists—sound scientific knowledge and commercial acumen. He was educated at King Edward's Grammar School, Birmingham, and from there went to Ley's School, Cambridge, the late Dr. Moulton being principal at that time. His father determined that he should have a thorough scientific training, and accordingly he entered Mason College, with a view to taking the bachelorship in science of the London University. This he did in due course, also qualifying as a chemist and druggist on October 16, 1889, and as a pharmaceutical chemist in April following. He attended the courses at Bloomsbury Square. He then took a more active part in the departments of Messrs. Southall Brothers & Barclay's business, especially the laboratory work, and in the latter connection during the past ten years he has contributed well to the literature of pharmacy, his first more notable paper being that contributed early in 1893 to the Midland Pharmaceutical Association on the "Standardisation of Belladonna Preparations." Standardisation was always a strong subject with him, but his work was by no means confined to this, and we may recall his notes on saffron, colocynth, jalap, coca adulteration, and tincture of fresh henbane as examples of his versatility. In 1896 he re-wrote the fifth edition of Southall's "Materia Medica," of which several editions have since been published, and his intimate knowledge of materia medica was taken advantage of by the governors of Mason College, who appointed him lecturer on the subject. He laid the foundations of this department, and when the University of Birmingham was instituted he was appointed extra-mural examiner in materia medica. He had always taken a keen interest in the Midland Pharmaceutical Association, through which much of his work was published, and served in various offices, and was appointed President in 1900. As one of the managing directors of Southall Brothers & Barclay (Limited), he had special charge of the various laboratories of the company, and was greatly beloved by the whole of the staff. He leaves a widow and one child.

BICE.—At Carhayes, on July 16, while bathing, Mr. James Bice, chemist and druggist, St. Austell, aged thirty-eight. Mr. Bice was greatly respected, and much sympathy is felt for his widow. Mr. Bice is said to have been an excellent swimmer. A verdict of accidental death was returned at the inquest.

BROOKE.—Mr. Thomas Noden Brooke, chemist and druggist, of 91 Rochdale Road, Manchester, was found dead in bed on July 20. Mr. Brooke was only forty years of age. He succeeded Mr. Harold Stevenson Lockwood at the above address. About five weeks ago Mr. Brooke suffered from heart-disease, but had apparently regained his normal health, and his family left Manchester for their summer holidays two days before his death.

DAY.—The death has taken place, at Horncastle, of Mr. John Day, pharmaceutical chemist, who for four years past had carried on business at Dudley. Mr. Day took ill a month ago, and has died at the early age of twenty-seven.

KNIGHT.—At Romford, on July 9, Mr. Charles Knight, chemist and druggist, aged forty-six.

LAYCOCK.—At Rotherham, on July 15, Mr. Robert Laycock, formerly of The Market, Rotherham. Mr. Laycock, who died from cancer in the throat, was formerly in business at Scarborough.

SLEIGHT.—At Leeds, on July 10, Mr. William Wilson Sleight, chemist and druggist, aged sixty-six.

THORPE.—At Eastleigh, on June 29, Mr. Alfred Thorpe, chemist and druggist, formerly of London, aged sixty-seven.

Summer Number Supplements.

When advertisers have anything of importance to say to the drug-trade, the journal they invariably select is The Chemist and Druggist, which is read by practically all "live" chemists the world over. It is this fact that influences advertisers who wish to address buyers of chemists' goods. The reputation of this journal as the medium for drug-trade announcements has been the steady growth of years, during which we have spared no trouble in making it the most attractive and the brightest trade paper published. That it is the biggest of the technical journals, the present number is sufficient to show. Twice yearly we are in a position to receive circulars, price-lists, and insets, which, distributed to our many thousand subscribers, form a unique method of reaching the business part of the community of pharmacy. Our advertisers tell us that good business follows when they use our advertisement-pages, which shows that our readers appreciate the use of the advertising-pages as well as the literary matter. The next opportunity for inserting circulars in The Chemist and Druggist will be January 30, 1904, and the Publisher will send to interested parties any particulars of size and style desired. The following notes are alphabetically arranged, the figures at the end of the paragraphs indicating the position of the inset.

Allen & Hanburys (Limited), Plough Court, Lombard Street, E.C., have a beautifully designed and printed price-list of toilet-soaps. The list is one of the most artistic it has ever been our pleasure to insert in The Chemist and Druggist. Not only is the cover a work of art, but the production of the illustrations in colours gives buyers a better idea of the get-up of any particular soap than would monotone drawings or pages of letter-press. The designs of the wrappers and boxes of soap are invariably of the chastest, and from experience we know the soaps are of the best. The section of the list devoted to perfumes in bottles and caskets is equally attractive. Our readers have in this inset the nearest approach to a personal visit from an "ambassador of commerce" it is possible to have, with the advantage that there is no time-limit placed upon them in examining the goods. (Inserted loose.)

Baiss Brothers & Stevenson (Limited), Jewry Street, E.C., have a well-got-up inset printed in red and green on tinted paper. An attractive picture of the good ship *British Empire* forms an excellent frontispiece, and the other pages are devoted to special summer lines, Dr. Mackenzie's malted food, Krysyl, emulsion of cod-liver oil, santalwood preparations, and other well-known pharmaceuticals. With each of these articles special prices are quoted, so as to induce chemists to make leading lines of what the proprietors believe to be the best goods of their kind in the market. (Pp. 32 and 33.)

British Automatic Aërators (Limited), Alderman's House, Alderman's Walk, E.C., insert a twenty-four-page booklet which tells of the "Consol" patent automatic aërator. This machine, adapted for the rapid manufacture of aërated waters from cylinder carbonic-acid gas, is purchasable either outright or on the hire system. The "Consol" is an English invention and English made. (Pp. 32 and 33.)

A. C. Broomfield, 277 Kennington Road, S.E., introduces to chemists a new proprietary article—Tuberco. It is a remedy for tuberculosis in the early stages, and is to be advertised somewhat extensively to the public. (Pp. 168 and 169.)

Brunner, Mond & Co. (Limited), Northwich, Cheshire, again call attention to their mineral-water bicarbonate. The pink inset emphasises the advantages which bicarbonate of soda possesses over whiting in the aërated-water trade. The arguments used seem particularly convincing. (Pp. 64 and 65.)

James Burrough (Limited), Cale Street Distillery, Chelsea, are known to chemists for S.V.R., S.V.M., and table wines and spirits. The inset which this company insert does but remind the pharmaceutical fraternity that these articles are still of best quality, quantity, and strength. (Pp. 200 and 201.)

H. W. Carter & Co. (Limited), The Old Refinery, Bristol, give details of their leading lines in soluble essences. The circular is a very attractive one by reason of its being printed in colours, and having on the front a natural grouping of Nature's choicest fruit. The "Red Elephant" brand of soluble essences is the property of this company. Colonial and foreign copies only.

Edward Cook & Co. (Limited), London, insert four pages of three-colour pictures of their specialities in soap. The photographic method is excellently adapted for showing what the article looks like, and at the same time gives an idea of the versatility of the company whose goods are represented. The backs of the pictures are utilised for extracts from the price-list. These show the leading lines in soap, indicating to pharmacists the best kinds in which to specialise. Colonial and Foreign copies only.

Arthur H. Cox & Co., Brighton, keep chemists in mind of their well-known tasteless pills in a neat inset. The formulæ quoted for tablets show the development of this department of the business. Quotations are given for all the combinations of drugs which are best administered in this form. A special list of pills is published, which is a most wonderful collection of formulæ. (Pp. 168 and 169.)

Elliman, Sons & Co., Slough, in their inset make a notable addition to the art-gallery of pharmacy. The pages are so arranged that they can be detached and used as showcards. The subjects of the pictures are horses, and the pictures have been drawn by experts and reproduced in colours in the best style. More particulars are given of the R. E. P.

book to be issued almost immediately, which is to tell the proper first-aid treatment for all ordinary diseases. The summary of the contents shows that a wide range of subjects is treated of in the book. Chemists are asked to have their names registered pending the issue of the R. E. P. book, as special terms are being arranged. (Pp. 32 and 33.)

The Erasmic Company (Limited), Warrington, devote their supplement to the "Duchess" brand of toilet-soap, a British-made soap in which quality and cheapness are happily combined. The chromograph reproduces the label used on the dozen-box of the soap. An announcement is also made as to the enlargement of the tablets of "Peerless" and "Elite" erasmic soap. (Pp. 32 and 33.)

The Fairbanks Company, 78–80 City Road, E.C., give particulars of two of their weighing-machines—a dispensing-scale and a personal weighing-machine. The dispensing-scale is on the steelyard principle, and hence does not require loose weights, weighings from ½ gr. to 8 dr. being obtained by moving poises along the graduated bar. The other weighing-machine, also on the steelyard principle, is for obtaining accurate records of the increase or decrease in personal weight. It frequently happens that a physician wishes to check the weight of a patient as an indication of progress, and it is for this purpose that chemists will find the Fairbanks' machine one of the best machines on the market. (Pp. 168 and 169.)

C. Faust & Co., 2 The Crescent, Tower Hill, E.C., give particulars of the "Perla" perfumes. These novel perfumes are concentrated solutions, which, when diluted with spirit in the correct proportions, yield superior perfumes and other toilet-articles at cheap rates. Examples are given of the required dilution, and from the cost of the various constituents it will be found that the claims put forward are amply substantiated. (Pp. 32 and 33.)

Fickus, Courtenay & Co., St. Dunstan's Buildings, St. Dunstan's Hill, Great Tower Street, E.C., insert a supplement dealing with the famous "No. 4" eau de Cologne. The prices of all the sizes of this brand of Cologne are quoted both duty-paid and in bond, whilst the facsimile bottles remind chemists of the three styles in which the perfume is packed. (Pp. 32 and 33.)

Chas. M. Higgins & Co., 106 Charing Cross Road, London insert a list of Higgins's improved adhesives for various purposes. The photo-mounter is well known in the photo graphic trade, but this is only one of the series of adhesives. There is the drawing-board and library mucilage (an extra strong article), office-paste (for general use), liquid paste, vegetable-glue, and taurine-mucilage. The smoothness and keeping qualities of all these preparations are their special recommendation. (Pp. 64 and 65.) Home copies only.

Jewsbury & Brown, Ardwick Green, Manchester, insert a circular calling attention to the quality of the mineral waters they manufacture. An excellent photograph of the premises at Ardwick Green is given on the front page, whilst on the back of the circular are a few points regarding the sale and distribution of the mineral waters for which the firm are noted. (Pp. 32 and 33.)

Killet's Chemical Company, Milford Street, Liverpool, offer attractive handbills for counter-distribution by chemists. The chief speciality of this company is the A1 powder weed-killer, which is packed in tins, the smallest being sufficient to make 25 gals. of weed-killer. Particulars of this and the "Premier" lawn-sand and "Demon" insecticide are given on the back of the counter-bill. (Pp. 200 and 201.)

H. & T. Kirby & Co. (Limited), 14 Newman Street, Oxford Street, W., have a four-page circular devoted to the clinical uses of Purgen, the new synthetic aperient. Purgen is an Austrian invention, and is put up in three sizes of tablets, adapted for infants and adults. Considerable demand should result from recent physiological tests which have been made with purgen, and its usefulness is amply demonstrated in this inset. (Pp. 168 and 169.)

Lamont, Corliss & Co., 11 Queen Victoria Street, E.C., use their inset for announcing a profit-sharing scheme on the sale of Mennen's borated-talcum toilet-powder, and the "Marvel" whirling-spray syringe. The special inducements offered to retail chemists only apply during the month of August. On the reverse side of the circular the virtues of Mennen's talcum are described by famous people—a method which carries more weight with most people than would pages of the proprietors' own recommendations. (Pp. 32 and 33.)

McDougall Brothers, 10 Mark Lane, E.C., give useful details of their various disinfectants. The newest preparation is the "Kudo" bacteria-powder, which, as shown by a certificate from Dr. Rideal, the bacteriological expert, is infinitely superior to carbolic powder. "Kudo" soap is a really effectual bactericide. The other disinfectants mentioned on the inset are the "A" soluble disinfecting-powder (containing both carbolic and sulphurous acid), McDougall's (non-poisonous) purifier (No. 9), a liquid substitute for carbolic acid, carbolic soaps, and fluid carbolate. (Pp. 200 and 201.)

McKesson & Robbins, New York (London agents, S. Maw, Son & Sons, 7 to 12 Aldersgate Street, E.C.), insert a four-page circular which tells of "McK. & R.'s" capsuled pills. A selection of formulæ is given on the inner pages, from which it will be seen that the whole range of materia medica is covered, and that all kinds of remedies are obtainable in the form of capsuled pills. (Pp. 168 and 169.)

Newball & Mason, Nottingham, the well-known makers of extract of herbs and other much-appreciated herbal drinks, devote their inset in the main to views of the new factory in which the preparations are made. Prettily printed in a brown ink on toned paper, the effect of the illustrations is much enhanced, and the circular forms an interesting souvenir of a unique industry. (Pp. 32 and 33.)

The Preservaline Manufacturing Company, 41–43 Warren Street, New York, U.S.A., insert a leaflet giving particulars of Preservaline, which has for twenty-six years enjoyed a front place as a food-preservative. The uses to which Preservaline can be put are many, and it is due to this preparation that the meat-packing industry of the United States and the butter-export of our Colonies have assumed such importance. (Pp. 64 and 65.)

Rosbach Water, London office, Rosbach Wharf, 81 Commercial Road, Waterloo Bridge, S.E., is described in a tasty four-page inset. A facsimile representation of a bottle of Rosbach water is given on the front page, and the reason for its sub-title, "Empress of Table-waters," clearly brought out in the letterpress that follows. The analysis of the water given shows the entire absence of iron—an important fact when it is desired to mix a table-water with spirits or wines, some of which containing traces of tannin would yield an unpleasant-looking beverage if iron were introduced. (Pp. 32 and 33.)

Spottiswoode & Co. (Limited), 8 New Street Square, E.C., give a few ideas on posters or showcards, which show what the company can do in this way. Although the circular is in monotone, it conveys an unmistakable sense of smartness, without which modern advertisements might just as well not be issued. (Pp. 64 and 65.)

Stevenson & Howell (Limited), 95a Southwark Street, S.E., tell in their inset of the essentials for success in the aërated-water business. This tasteful circular in black and yellow mentions some of the special essences for which the company are noted, and it is at the same time an indication of what essences and flavours are popular at the present time. A full list of essences, with prices, will be sent to any applicant interested in the subject either as an aërated-water maker or as the proprietor of a soda-fountain. In both these departments the success of the products depends entirely on the excellence of the flavours used. (Pp. 64 and 65.)

The Standard Tablet Company, Hove, have an eight-page inset devoted mainly to tablets. An excellent list is given of the drugs prepared by compression. Tablets for external preparations and effervescing tablettes are varieties of the standard tablet. A page is devoted to suppositories and pessaries, whilst a good line of glycerin-lozenges is shown on the last page. (Pp. 168 and 169.)

Chas. Tyler & England Brothers (Limited), 79 Copenhagen Street, King's Cross, N., give particulars of the latest photographic mounts and cameras in their circular. The newest patterns in "Champion," "Sirdar," "Ansco," "Teb," "Kay Cee," and "Empire" cameras are shown, and the mounts illustrated are all the very latest. Photographic chemists should study this inset, which will be found between pages 64 and 65.

William R. Warner & Co., British depôt, Francis Newbery & Sons, Charterhouse Square, E.C., show in an eight-page inset the chief lines they manufacture in high-class pharmaceuticals. Pills and tablets are sold either in bulk or packed ready for sale, and in the case of ready-put-up goods the retailer is advised when it is necessary to affix patent-medicine stamps. Effervescent lithia tablets for making lithia-water are at present a very popular form of gout-treatment, and arrangements have been made to supply a bas-relief showcard to help along the sale of the tablets. The showcard is one which the most fastidious pharmacist could not object to use in his pharmacy. (Pp. 168 and 169.)

Williams Brothers & Co., Hounslow, who are one of the largest makers of aniline-colours, briefly note their specialities. The applications of aniline-dyes are now so numerous that each branch of industry requires special colours, but in spite of innumerable tints and requirements this firm are able to meet all demands. (Pp. 200 and 201.)

Saccharin-smuggling.—At Liverpool, on July 22, Amando Petri was remanded on a charge of smuggling 41 lbs. of saccharin, which had been consigned in a trunk with false bottom to Lime Street Station, Liverpool.

Practical Notes and Formulæ.

POWDERED CASTOR OIL

is being sold rather freely just now. It is made in several ways, one being to emulsify the oil with skimmed milk and evaporate the mixture to dryness, and another consists in mixing the oil with extract of malt and carefully evaporating. There is a form of castor oil prepared as a by-product in the manufacture of brandy-flavour in France, which might probably be utilised in medicine if some pharmacist would experiment in the production of suitable preparations.

COMPOUND SYRUP OF CAMPHOR.

The formula for this capital cough-mixture originated at the Bristol Royal Infirmary, and may conveniently be repeated at a time when, through the visit of the British Pharmaceutical Conference, pharmacy is in the ascendant in the Western city:

Acidi benzoic.	ʒiij.
Acid. acetic. glacial....	℥iij. ʒv. ♏xx.
Aceti scillæ	Oij.
Aceti ipecacuanhæ	Oij.
Ol. anisi	ʒij.
Camphoræ	ʒij.
Tr. opii	℥x. ʒv. ♏xx.
Sacchar. alb.	lb. xxviij.
Sacchar. ust.	q.s.
Aq. ad...	Cong. iv

M.

Dose: ʒj. (= tr. opii ♏j.) occasionally.

"COIN-LIFTING CAPACITIES" IN GRAINS.

It is sometimes useful to know exactly how much of a solid remedy in powder form will go on a coin, as customers are often advised to take for a dose as much of a remedy as will go on a given coin.

	3*d.* Grs.	6*d.* Grs.	1*s.* Grs.
Antipyrin...	6	9	15
Bicarbonate of potash	10	15	25
Bicarbonate of soda (baking-soda) ...	10	15	25
Bitartrate of potash (cream of tartar)	8	12	20
Boracic acid	8	12	20
Bromide of potash	12	18	30
Carbonate of ammonia...	6	9	15
Carbonate of bismuth	7	10	17
Citrate of potash	8	12	20
Citric acid	6	9	15
Gregory's powder	2	3	5
Iodide of potash'...	16	24	40
Phenacetin	6	9	15
Quinine (sulphate of quinine)	2	3	5
Salol	6	9	15
Salicylate of soda	5	7	12
Sulphate of magnesia (Epsom salts)...	8	12	20

—*The Chemist and Druggist of Australasia.*

SWABBING THE THROAT.

A recent number of the *Chemist and Druggist of Australasia* contains the following useful directions for swabbing the throat: The back of the throat, as far as it can be seen through the mouth, is the part usually concerned, and becomes hot, dry, inflamed, or granulated much more frequently, and causes much more irritation therefrom than any other part of the throat. To medicate this, a straight, not bent, brush should be taken, and the brush should be introduced under sight. The patient should be directed to stand with his back to the light, holding a hand-mirror in the left hand. Introduce the brush with the right hand, so that neither the palate nor tongue is touched; merely the back wall. It is well-nigh impossible to do this except in the way described. One dab at the back with any of the now common applications, containing menthol, will be found to run up to the back of the nostrils, and thoroughly permeate the whole pharynx. It is rarely or never useful or advisable to push a brush down a throat for a variety of reasons. The brush bent at an angle should pass out of existence; at any rate, for the patient's own use.

London Shop-windows.

What Chemists are Showing at Present.

It has been said that the face is an index to the mind, and by analogy a shop-window should reflect the business characteristics of its owner. It was not, however, with a view of studying comparative psychology that a *C. & D.* representative recently indulged in the pastime of gazing intently through the plate-glass windows of several London pharmacies. This scrutiny aroused the curiosity of some of the owners, who came and cast looks of suspicion and reproach upon him. "Ransom *v.* Sanguinetti" was, perhaps, the silent comment of some of them, and one gentleman, who sent out his boy with a duster to polish his immaculate plate glass, may have intended it as a piece of delicate satire. Lest, however, any of these pharmacists should feel any uneasiness of mind, let it be explained at once that the harmless object of the *C. & D.* investigator was merely to find out what is selling just now, and that any information, useful to Somerset House, which he may have gleaned is safely locked up in his inner consciousness.

The peripatetic investigator found, generally speaking, that a great lack of originality was shown in the manner of "dressing" the windows, and also in the choice and variety of the articles exhibited for sale. Some windows would have been further improved with a little freshening-up, and in one or two instances where revolving card advertisements appeared the mechanism had been allowed to run down in the busiest part of the day.

City pharmacies are a class by themselves, most of the customers, naturally, being men. Some of the windows incline to the variety that comes just short of the incidence of the Indecent Advertisements Act. Chase's beetle-poison and Smith's weed-killer find a prominent place in the City, possibly because of injunctions to paterfamilias "to bring something for those horrid beetles and tiresome weeds."

The summer season being at its height salines and citrates are everywhere on show. They figure under various names, but there is nothing very noteworthy either in nomenclature or "get-up." The Broadway Pharmacy, near Ludgate Hill, had a window full of "Carlsburga," a mixture of Carlsbad and Homburg salts, and some effervescing sulphur, sarsaparilla, and dandelion salts.

Soda-water fountains are much *en évidence*, and Lamplough's appear to be doing a good business in cooling-drinks. Sparklets also appear to be *en règle*, but the idea of throwing in a single seltzogene indiscriminately amongst a heap of soap, sponge-bags, and bathing-caps is to be deprecated. Articles of the same class should be grouped together, and the arrangement should be such as to give a definite impression even to the casual observer.

The pedal extremities are a frequent source of worry at this season, and the necessary "proprietaries" are well to the fore. Amongst these were the American corn-silk, asbestos hygienic socks, said by Meacher, Cheapside, to be "the sole thing worth living for." This is almost as bad as a card in Greaves & Huggins' window in the Strand, "Is life worth living? It depends upon the liver!" The remedy is podophyllin-and-dandelion pills. Other remedies are antiseptic foot-powder, New York corn-cure (shown by Hancock, Fleet Street, with a very effective show-card in black and white), loofah-socks, Army foot-powder, and corn-rubbers.

The "Crown" bathodora and violet oatmeal-soap are frequently seen, and Boutall's Ludgate Hill manager stated that the latter had proved a very good seller. Some other popular lines, met with everywhere, appear to be the "Marvel" spray syringe, euthymol preparations, odol, and orangeine. Nurthen's, in the Strand, have an especially good show of the last article. Anti-rheumatic rings are also in great vogue, and the "Rex" ring was shown in one case marked "plain 7*s.* 6*d.*, gold-chased 15*s.*" Owing, probably, to the prevalence of summer nasal catarrh, the various "one-day cold-cures" are just now finding a ready sale. Other seasonable lines seen were household ammonia (some very well "got up") and solution of ammonia in vulcanised bottles, with sponge for insect-bites. In neighbourhoods where mosquitoes are over-attentive an "insect-fluid" put up at 6*d.* and 1*s.* a bottle ought to sell well. Another seasonable item is an elderflower-and-benzoin lotion put up in a white opal glass bottle. Bishop's, Holloway, are making a good show of lemonade-crystals.

Photography, naturally, has a place in the show, but not to the extent one would have imagined. The selling-value of a window is still, apparently, not fully judged by some London chemists. An indiscriminate and conglomerate heap of cameras and accessories is not calculated to strike a passer-by with the idea that he not only wants a camera, but that *here* is the best place to buy one. A few cameras, with a good specimen of the work which may be done with each, will better arrest attention. To place alongside a small camera a whole-plate specimen photo is a *suggestio falsi* that will *not* lead to good business.

One of the most effective photo-displays is in Lamplough's in the Strand. A neat little show, on a glass shelf, of toning and other solutions in green poison-bottles ready for use particularly took my fancy. A "Notice to Amateurs" regarding developing, printing, "faking," and lantern-slide making, appeared in the window, with an intimation that a separate quotation would be given for each kind of work. This window abounded also in novelties: "Clensall," a disinfecting, cleansing jelly, in lever-topped tins, at 9½*d.* Digestive chocolettes, very well "got up," in bottles, 1*s.* and 2*s.* 6*d.* The "Master" anti-rheumatic ring, 4*s.* 6*d.* The "Ideal" pocket dispensary, an emergency-outfit in an oblong tin case for sickness and accidents. "Cristoline," a metal tarnish-and-rust preventive, 6*d.* The "Presto" collar-and-cuff fray-remover, 6*d.* The "Walmsley" cleaning-pad; many shops have this, but here a card describes it as a "London-mud remover." Lastly, a hair-curling set.

A walk down the Haymarket proved instructive, and some of our firms might profit by studying the artistic "get-up" of the French proprietaries on view. Jozeau's are showing a perfumed water-softener, and Hairsine's have a novel idea in a show of tooth-brushes in different stages of manufacture. Belgian, American, and Russian bristles are exhibited, as also a piece of prepared ox bone for making the bone handles. Another good window is Heppell's, a large space being devoted to a show of Mennen's borated talcum-powder, "Oowana" soap, and lemona.

The finest exponents of the art of chemists' window-display are undoubtedly Goss's in Regent Street. Each window, like the advertisements of a well-known pill, "tells its own story" and tells it well. The general colour scheme is good and pleases, while it attracts the eye. The bath soap-bowls and shampoo-brushes make an effective show.

Another good idea was seen in Starkie's window at Charing Cross. Bayley's perfumes are shown, and, as a guarantee of respectability and antiquity, the original ledger of Bayley & Co. is exhibited, showing the account of his late Majesty George IV. for perfumes and toilet-articles.

Some out-of-the-way things seen were American cocktail bitters, artificial perfumed flowers, chewing-gum, "Our Native Herbs" (imported from America!), Richard III. hair-wash (the connection is somewhat obscure).

Recent Wills.

Cox.—Mr. Arthur Hawker Cox, of Arthur H. Cox & Co., manufacturing chemists, Brighton, three times Mayor of Brighton, has left property to the value of 17,562*l.* 5*s.* 4*d.*, of which 8,578*l.* 18*s.* 2*d.* is net personalty. Mr. Cox, who died at his residence, 35 Wellington Road, on April 6, 1903, appointed as his executors Mr. Frederick Wm. Welch, of 7 Florence Road, Brighton, Mr. Thomas Eggar, of 46 Old Steyne, and Mr. William Herbert Cox, his son. The will and codicils, 116 folios in length, are dated April 28, 1896, July 23, 1898, and January 4, 1900. The testator gives very full directions for the carrying on of his business.

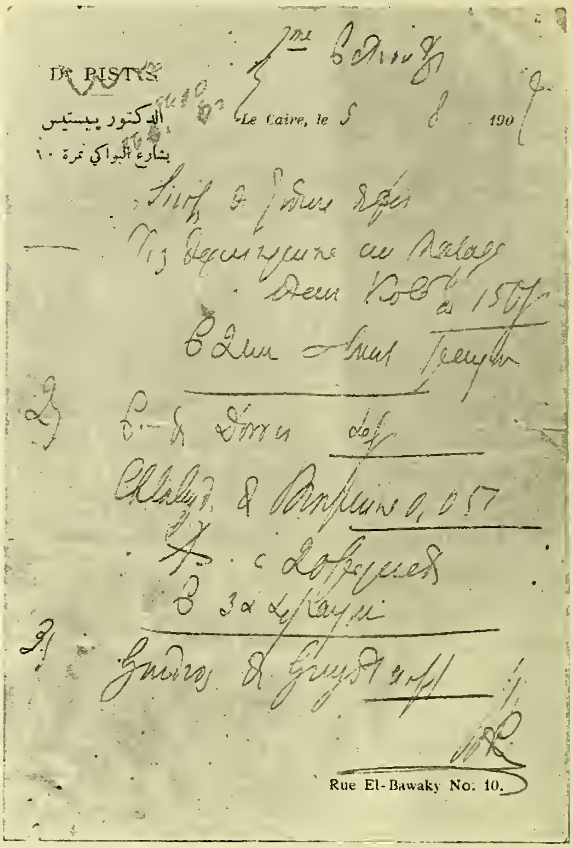
Farnworth.—Under the will of the late Mr. Walter Farnworth, pharmaceutical chemist, Mayor of Blackburn, a bequest of 2,000*l.* has been left to the Blackburn Orphanage, a similar sum to the Blackburn Ragged School, and 5,000*l.* each to the Blackburn District Nursing Association and the Blackburn Infirmary.

In the Land of the Pharaohs.

EGYPT has always been an attractive country for the English-speaking race, but it is only of recent years that it has acquired the reputation of a safe and popular health-resort. Nowadays British and American tourists flock in shoals to this wonderful country, which possesses all the glamour of an ancient history, combined with the comfort (or as near it as possible) of the travelling facilities of modern civilisation. And as, sooner or later, the English pharmacist is a "felt want" in any community even approaching civilisation, so Egypt has been no exception to the rule. It follows that the pharmacist in Egypt, to adapt himself to his multiple environment, must be a man of many parts. For at the outset of his career in the land of the Pharaohs he has not only to know that this is the year of our Lord, 1903, but that the year 5664 of the Jewish era begins on September 22, 1903, that the year 1321 of the Mohammedan era begins on March 30, and the year 1620 of the Coptic era begins on September 12. The Mohammedan and Jewish day begins at sunset and the Coptic day at sunrise. An 8-per-cent. *ad-valorem* import-duty is charged on all goods entering the country, and at Alexandria an additional ½ per cent. is charged for quay and paving dues. The export-duty is 1 per cent. *ad valorem* on all products of Egypt and the Sudan. No export-duty is charged on foreign goods re-exported, and a refund of 7 per cent. is made on articles re-exported within six months, provided that their identification can be proved. Vaccination is compulsory in Egypt for all Europeans and natives, and the Public Health laws are after the model of the British laws. By Arrête of June 13, 1891, no person can practise medicine, veterinary medicine, pharmacy, dentistry, &c., in Egypt without permission from the Sanitary Department. This permission is only granted on the applicant presenting a diploma from some recognised School of Medicine, Veterinary Medicine, or Pharmacy. A Veterinary School of Medicine attached to the Sanitary Department was opened in 1901. The course of study extends over three years, at the end of which period successful candidates are granted a diploma authorising them to practise as veterinary surgeons in Egypt.

As has been shown in THE CHEMIST AND DRUGGIST recently, there is considerable agitation at present going on with a view to the establishment of a simple code of rules and regulations applicable to the whole of the pharmacists of Egypt. For, as we pointed out some time ago, the Arrête of 1891 is found in practice to exercise no control over any but the native pharmacies. The possessor of a certificate of competency of any country is at liberty to set up in Egypt, and although he may take no part whatever in the business, merely employing an assistant, who may or may not know the difference between phosphorus and methylated spirit, so long as the shop remains under the *diplômate's* name it has a perfectly legal existence. One pharmacist may have several shops, even in different towns, and in the case of "season" pharmacies it is advisable for the prospective purchaser of medicine to ascertain beforehand whether a qualified chemist or the Cairo branch shop-sweeper be in charge. These are said to be by no means exaggerations of the present condition of affairs; it is therefore evident that pharmacy legislation is urgently needed. The failure of the Government Pharmaceutical School, which was tried some time ago, is attributed solely to the miserable salaries paid to assistants in pharmacies, consequent upon the apparent worthlessness of any certificate of competency. But even worse evils in Egypt are the adulteration and substitution (in the true sense of the term) that are prevalent. Some "pharmacists" are said not only to dispense prescriptions to suit their stock without any great regard for the wishes of the prescriber, but also to manufacture and sell barefaced substitutes for the better known natural mineral waters, eau de Colognes, chlorodynes, and such-like articles. The Government inspectors, as has been said, exercise no jurisdiction outside native pharmacies.

The Egyptian hospitals have a small Pharmacopœia of their own after the style of the London hospitals. The preparations of the French Codex are generally used in dispensing, except for English prescriptions. We reproduce below a typical prescription:



Dr PISTYS

الدكتور بيستيس

بشارع البواكي نمرة ١٠

Le Caire, le 5 8 190

Rue El-Bawaky No. 10.

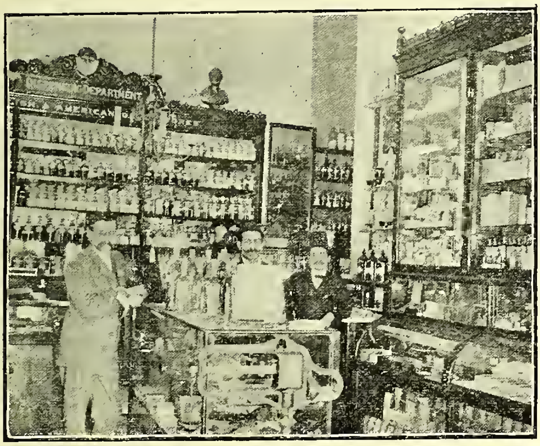
A Cairo Pharmacy.

One of the best businesses in Cairo is that of Stephenson & Co., chemists, in the Opera Square. The proprietor, Mr. George H. Stephenson, pharmaceutical chemist, whose portrait we give, acquired the cosmopolitan knowledge, so necessary to him, by first spending thirteen years in the Straits Settlements. He was for six years Government-analyst and inspector and tester of petroleum, and afterwards became managing-director of Maynard & Co. (Limited), of Singapore and Penang. Mr. Stephenson and his brothers at that time owned extensive pepper and tapioca plantations in Malacca. Desiring a change he came to London, and it was while managing a West-End business that he got his first notion of Egypt. Doctors and people who wintered there frequently told him of the opening for an English chemist in Cairo, so Mr. Stephenson decided to try the East once more, and commenced business in his present establishment in November 1899. His was the first English pharmacy opened in Egypt, and since then he has started a branch in Alexandria. Messrs. Stephenson & Co. do a high-class dispensing business, especially in the season, and dispense for a great many English and American celebrities and people of rank. They get through a good

Mr. Geo. H. Stephenson.

proportion of English and foreign specialties and druggists' sundries, but not many patent medicines or much perfumery. In the summer the dispensing of cold drinks is the principal occupation. They are made with fruit syrups and iced soda-water. Since they started in 1899, Messrs. Stephenson & Co. have dispensed about eleven thousand two hundred and eighty fresh prescriptions without repetitions. The season trade done is similar to that in the South of Europe winter resorts. Most of the Cairo pharmacists get their supplies from the local wholesale houses, Fischer, Del Mar, or Galetti; but the principal houses import consignments from their respective countries as well. The duty on everything coming into Egypt is 9 per cent., and the expense of landing goods into Cairo is, we are informed, seldom less than 25 per cent. Regarding the enforcement of the Pharmacy regulations Mr. Stephenson writes:

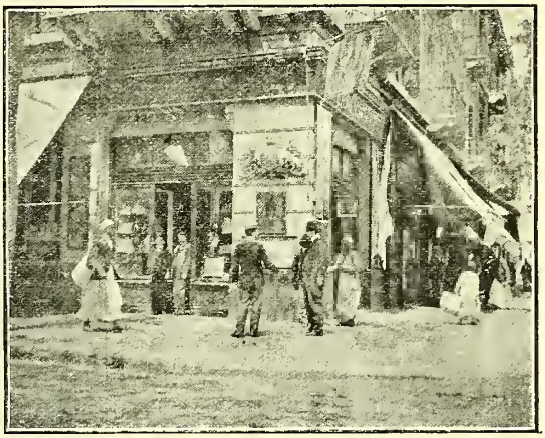
> It is found very difficult to enforce any regulations, as the Consul of each nation has to be applied to before any action can be taken by the Sanitary Office, so that I imagine it will be some time before satisfactory regulations can be enforced to suit all nations. Then, again, they cannot say too much about being qualified, for all the qualified men have to be imported. I believe it is possible to qualify here, but I never heard of anyone doing so; I cannot make out why.



Stephensons' Pharmacy—Interior.

Assistants in Egypt.

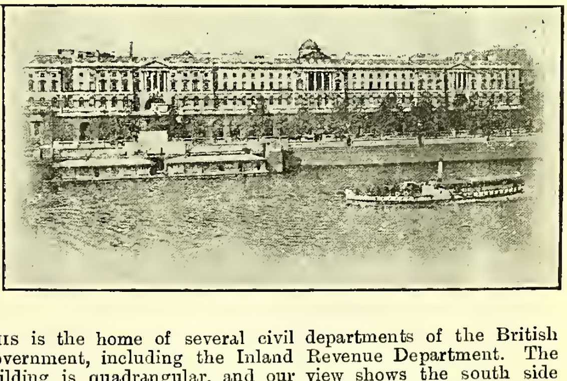
There are two pharmacies in Cairo with English assistants. The proprietors of the pharmacies of Cairo are of every nationality—French, German, Italian, Greek, Arabic, Armenian, Syrian, &c.—and there are about eighty pharmacies altogether. The assistants are mostly Greeks and Syrians, and amongst whom are found some good pharmacists, especially those qualified at the American College in Beyrout, Syria. It is astonishing the number of languages all these assistants speak. The hours of business are very long. This is necessitated by the doctors always writing prescriptions. None of them keep surgeries or dispensaries of their own; they even tell patients to get urine examined by their chemist, and bring them the analysis. In dispensing, the metric system is invariably employed, even by the English doctors. The principal trouble is the amount of new preparations that have to be kept in stock, for the doctors are as various as the chemists, and this adds to the variety. Almost daily something is wanted that the luckless pharmacist never heard of before. Almost everything is dispensed in cachets, the cachet-machine consequently getting very little rest. There are about three hundred doctors in Cairo, which, next to Constantinople, is, perhaps, the most cosmopolitan city in the world. It is very hot and slow in the summer time, as nearly everyone that can afford it goes away to cooler climes. Mr. Stephenson reports that many celebrated English and American chemists call into his pharmacy during the season, when they are wintering there, and chat about the trade. All the pharmacies in Cairo have a name, and most of them try to get it as English as possible, although when one goes inside he seldom finds anyone that can speak English. There is the Anglo-German, the Anglo-American, the British, the London, the Anglo-Egyptian, the New English, and many another with similar names. The prices for prescriptions are what one would get in a good-class pharmacy in England. Patents yield more profit than at home, but it is counteracted by the high rents and costly transport. "Egypt is not an ideal place to live in," concludes Mr. Stephenson; "the climate is pretty good, but you cannot get anything done unless you do it yourself. The servants—Arabs and Nubians—are dreadfully filthy, lazy, and stupid, more so than any natives I have yet come across, and they want constant watching. One cannot help wondering how a country with such inhabitants is to make any progress, for nothing is made in the country; everything has to be imported, except what the fellaheen grow on their little farms."



Exterior of Stephensons' Pharmacy.

We give two illustrations of Messrs. Stephenson & Co.'s pharmacy, which was fitted by Messrs. F. Sage & Co., of London, and is a very handsome one, for even the Americans who go in admit—"You have got a fine drug-store, right here."

SOMERSET HOUSE.

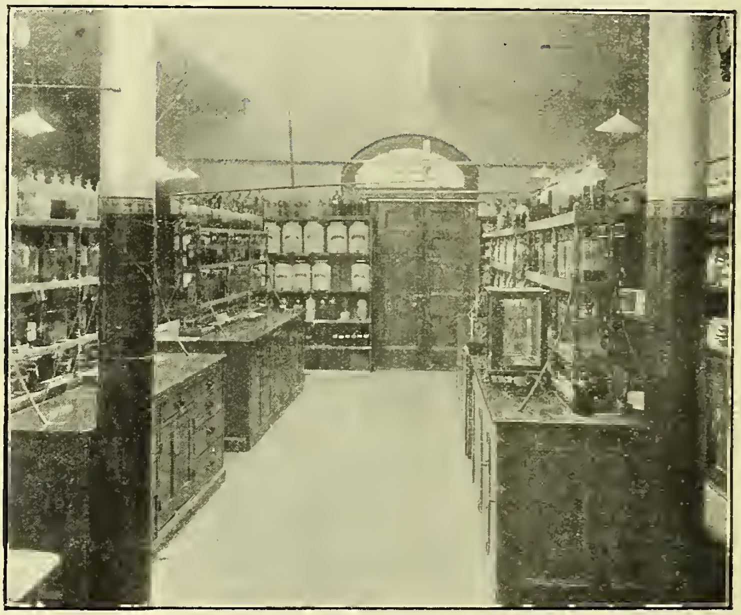


This is the home of several civil departments of the British Government, including the Inland Revenue Department. The building is quadrangular, and our view shows the south side facing the River Thames. The entrance is on the north from the Strand. The east wing is occupied by King's College and School, which have a distinct entrance. The west wing is the one which chemists and druggists are most interested in. There the Government laboratories used to be inadequately housed, and their removal to St. Clement's Passage has given better accommodation to certain departments of the Inland Revenue. Somerset House is built on the site of the palace of the Protector Somerset, and was open in 1786. We give the picture and these particulars because the place is the centre of pharmaceutical interest in Great Britain at the present time.

Pharmacy in Bristol and Clifton.

Notes in anticipation of the return visit of the British Pharmaceutical Conference.

PHARMACISTS who follow the wanderings of the British Pharmaceutical Conference are always interested in the development of pharmacy in the cities visited. It is on this account we present a few notes on the pharmacies of Bristol and Clifton. It should not be thought, however, that we have treated the subject at all exhaustively, as limits of space prevent us even mentioning a number of pharmacies in the district which would properly find a place in this article.



Dispensary of the Bristol Royal Infirmary.

There are several medical charities in Bristol, but the foremost institution of the kind is

Bristol Royal Infirmary.

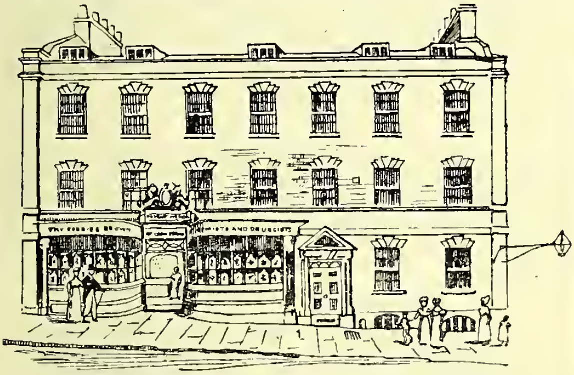
Mr. A. L. Taylor.

The infirmary is one of the oldest in the Kingdom, having been established in 1737 through the exertions of Mr. John Elbridge. The present building was begun in 1784, the east wing finished in 1788, and the west wing in 1806. The outer walls were at this time covered with black plaster, which gave the institution a most doleful appearance, and it was not till 1858 that, at the expense of Mr. H. A. Palmer, a better appearance was given by the removal of the old plaster, but the house still has a very plain exterior. At the expense of Mr. S. W. Hill two new wards were added in 1868, and in 1875 the whole building was renovated at a cost of something like 15,000*l*. A temporary hospital was fitted up in Colston Street whilst this was going on. Two years ago a new bacteriological laboratory was opened by Sir F. Treves. This laboratory is under the care of Professor A. Stanley Kent, and the pharmacist acts as his assistant, preparing the culture-media and stains. The Bristol Royal Infirmary also possesses those indispensable adjuncts of modern medicine and surgery, an *x*-ray department and lupus-light room, and also a room for the application of high-frequency currents. two operating-theatres, museum, &c. The institution has 260 beds, and an annual out-patient attendance of about fifty-six thousand. The infirmary stands on a hill-side at the corner of Maudlin Street, the dispensary being on the ground floor if approached from the rear of the building but two floors underground from the front. The dispensary and out-patient rooms occupy practically the whole of the ground-floor at the rear. There is an inscription in the board-room to the effect that John Elbridge, "who was among the first who engaged in this charity, was chosen treasurer, and cheerfully undertook the care of the buildings and of providing furniture of all kinds for the house and apothecary's shop entirely at his own expense." This shows that the apothecary's shop was considered of importance from the very first. The pharmaceutical department is certainly now one of the most perfect to be found in such institutions. It consists of the dispensary itself, bottle-store, two storerooms for drugs, laboratory, the pharmacist's private room, and chloroform and ether safe built into the wall. The staff consists of the chief dispenser (Mr. A. L. Taylor, pharmaceutical chemist), two assistants, and two apprentices. The last named have to pass a Preliminary examination before entering, and are expected to work systematically for the Minor. As all the analytical and chemical work of the infirmary is done by the pharmacist, there is plenty of scope for practical work. The medical students from the University College receive their instruction in practical pharmacy both here and at the General Hospital. Mr. A. L. Taylor, the chief dispenser, was born at Newport-on-Usk, and apprenticed with Mr. A. E. Atkins, of that town. Apprenticeship over, Mr. Taylor went to London as assistant to Messrs. A. P. Barnard & Son, Hackney Road, and as all stock pills, &c., were made on the premises, he obtained very useful pharmaceutical experience. Then a six-months' course at the Metropolitan College of Pharmacy took Mr. Taylor through the Apothecaries' Hall Assistants examination and the Minor, after which he entered the pharmacy of Messrs. Southall, Bull Street, Birmingham, for eighteen months, and read for the Major. A three-months' course at the "Metro." ended in his successfully passing the Major in October, 1894. Mr. Taylor next spent two years in the dispensary of St. Bartholomew's Hospital, and then was given charge of the dispensary of the infirmary at East Dulwich Grove. This he left in November, 1899, to take up his present position at the Bristol Royal Infirmary.

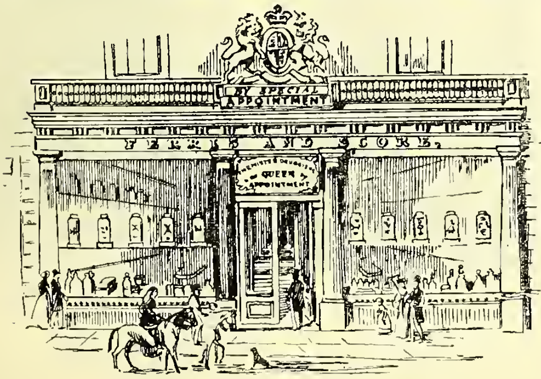
The oldest firm of chemists in Bristol is that of

Ferris & Co.,

whose pharmacy is situated in Union Street. The firm are well known to the trade from their being manufacturers of nepenthe and other largely-prescribed pharmaceutical preparations. The business was established by a Quaker named Tilladam, in the year 1770. and was located on the site of the existing premises in 1775. Previous to the seventeenth century, Bristol retained to a very large extent the appearance that it had in the time of the Plantagenets; but with the destruction of the Castle, and the expansion of business, the city began to extend: ancient buildings were taken down and new streets were opened up. Of these streets, Union Street (to unite Wine Street and Broadmead) was one; its formation being decided on in the year 1772, a new artery to the northern suburbs of the city being needed. The street was opened for traffic in 1775. After the death of Mr. Tilladam the business was conducted by his wife, Ann Tilladam, who retired in the early part of the nineteenth century, leaving the firm to be continued by one of the Frys, a Quaker family now known all over the world from their association with the manufacture of cocoa and chocolate. In 1812 the firm consisted of Fry and Gibbs, and were strengthened two years later by the inclusion of Richard Ferris. Fry, Gibbs & Ferris, as the firm were then called, entered on a course of prosperity. They added the manufacture of aërated waters to the business, and they also appear to have taken up most of the new developments of manufacturing pharmacy. In 1825 Mr. Gibbs left the firm, as pharmacy was not a sufficiently wide field for his business ability. He became interested in the manufacture of alkali on a large scale, and in 1834 was nominated one of the directors of the Great Western Railway, representing Bristol at the time of the formation of this company. Owing to a sad accident, however, he lost his life on one of the trial runs of the new railway. Mr. Gibbs's place in the firm was taken by Mr. Brown. In 1833 Mr. Fry retired, and the business was carried on as Ferris, Brown & Capper. This year is memorable in the annals of the firm from its being the date of a disastrous fire which razed the premises to the ground. It occurred on Saturday evening, September 27, 1834, and was caused by the ignition of a bottle of ether. As soon as it was detected, every effort was made by the Mayor and responsible authorities to extinguish the flames, but without success, and the partners, assistants, and workpeople in the business, concentrated their energies on removing the stock and the books. With considerable business enterprise, the firm that night obtained possession of other premises in the same street, and on Monday morning following, they carried on their business as though conflagrations were an every-day occurrence. The firm at that time opened a branch at The West Mall, Clifton, under the supervision of Mr. George Brown; and a few years later started a business in Clevedon. The growing importance of the business was emphasised by their appointment as chemists to King William IV., and the warrant was renewed in 1840, when Ferris, Brown & Score were appointed chemists and druggists to Queen Victoria. Since this a number of changes have taken place in the *personnel* of the firm, by the inclusion at various times of Mr. Coupland, Mr. J. H. Townsend (father of the present Mr. Townsend), Mr. Lamotte, and Mr. Boorne, all of whom are, however, dead. At present the firm consists of Messrs. Charles Townsend, John Boucher, H. H. Townsend, C. Boucher, and J. M. Boucher. Mr. C. Townsend has occupied important positions in civil affairs: he has been a member of Parliament for the city, and is now an alderman and magistrate. In addition to the retail department—which is one of the busiest in Bristol—the firm carry on a wholesale and export business, and also manufacture surgical instruments and dressings.



Ferris & Co.'s Premises before the Fire.

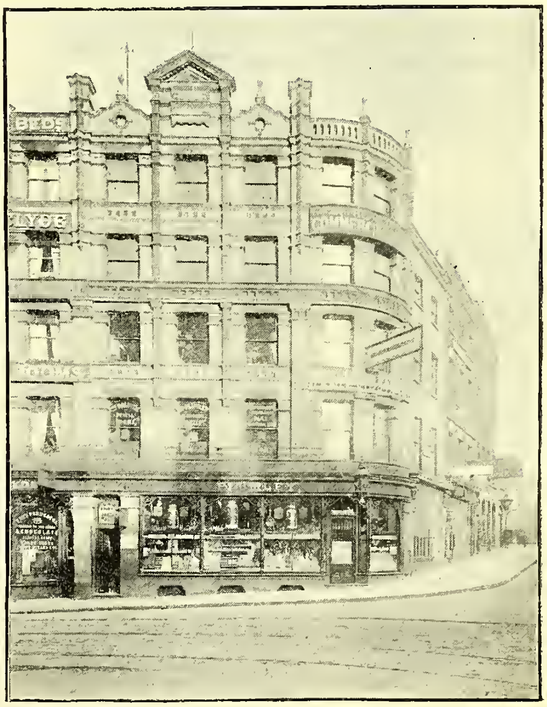


Ferris & Co.'s Retail Premises.

Among the relics of the business are some quaint soda-water bottles, old seals, labels, and confection-pots, which rather serve to accentuate the up-to-date character of the present business methods of Ferris & Co.

Mr. J. G. Plumley.

Bristol Bridge has always been famous in the annals of Bristol, and it is the oldest landmark of the city. At the corner of Bristol Parade, which leads from Redcliffe Street to the bridge, is the fine establishment of Messrs. J. G. Plumley & Son. The premises were built by Mr. J. G. Plumley in 1883 on the site of his former business, the demolition being rendered necessary by street improvements. The approach to the bridge was narrow, and had become inadequate for the immense volume of traffic which daily passes that way, and in 1883 the improvement was carried out. The former business premises—not the most convenient for a busy trade—gave place to the present handsome structure. Mr. Plumley carries on a dental practice on the first floor, the suite of consulting-rooms being entered by a

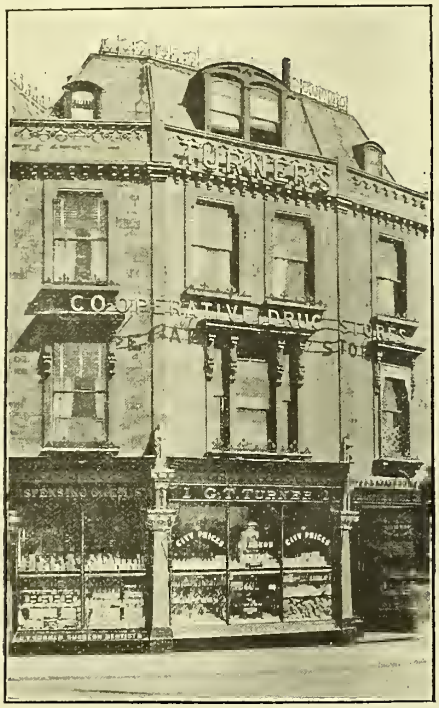


Messrs. J. G. Plumley & Son's Pharmacy.

side door. There are work-rooms on the upper floor, the intermediate rooms and cellarage being used for warehouse-purposes. Mr. Herbert J. Plumley is in partnership with his father, and takes an active part in the management of the pharmaceutical side of the business. The photograph gives a good idea of the imposing appearance of the premises, although recently improvements have been made in the shop-windows.

THE WHITE LADIES GATE PHARMACY,

Clifton is so named from a wicket gate which formerly stood there. This was at the time when fields and rustic paths were the features of the neighbourhood. The legend goes that this particular gate was the trysting place of a certain Romeo and Juliet. Juliet died a disappointed lover, but continued to haunt the spot for years afterwards. The path became a road, the wicket gate gave place to a turnpike gate, and eventually, some thirty-seven years ago, the pharmacy was built for Messrs. Hatch, Isaac & Co. The legend is kept alive in the name of the road, and in a sketch which forms the trade-mark of the pharmacy. Mr. G. T. Turner, pharmaceutical chemist, the present owner, acquired the business in 1878, and continues the traditions of a high-class dispensing and retail business which his predecessors commenced. Mr. Turner is also a registered dentist, and carries on a large dental practice at his residence in Osborne Road. We hope to induce Mr. Turner at some future time to give us some of his experiences during the twenty-five years he has been at Clifton. Many curious and interesting events have come within his knowledge, but we must confine the present article to an account of the pharmacies of Bristol as they exist to-day.



THE WHITELADIES GATE PHARMACY.

MR. G. T. TURNER.

The Bristol branch of Messrs. Evans, Gadd & Co. (Limited), Exeter, was opened in 1897, the nucleus being the drug-department of the old-established firm of Messrs. Warren. The premises are at 23 and 24 Redcliffe Street, and are under the management of Mr. H. E. Boorne, the Hon. Secretary of the Local Committee of the Conference, and Secretary of the Bristol Pharmaceutical Association.

Camwal (Limited) have also branch works at Bristol, in charge of Mr. R. R. Groome. The new premises were described in the *C. & D.* a year ago (July 26, 1902, page 126), and it will be unnecessary to allude further to them beyond saying that, adequate as the premises were thought to be a year ago, the capacity has since been strained owing to a considerable increase in the business.

DRUG-STORES.

As "Xrayser" remarked last week, Bristol is traditionally held to be the cradle of cutting. The late Mr. Hodder, at his shop in Broad Street, some thirty years ago, first began to sell drugs and medicines at cut rates, and his example is to-day followed by hundreds of other chemists and drug-stores. The company founded by Mr. Hodder is Henry Hodder & Co. (Limited), which was registered in 1887 with a capital of 25,000*l.*, in 1*l.* shares. The headquarters (shortly to be transferred to Wine Street) are at 9, 10, and 11 Broad Street, and the company have eight branches situated in various parts of Bristol. We published a sketch of the Broad Street shop in the *C. & D.*, January 29, 1898. Boots (Limited) have also two establishments in Bristol.

The name of

GILES, SCHACHT & CO.

naturally occurs to a pharmacist whenever Clifton is mentioned. The firm was founded at Royal York Crescent by Richard Bobbett Giles in 1821. Mr. Giles was apprenticed in 1805 to John Speed Waldron, who carried on an important business at the Hotwells, then the fashionable part of Bristol. Mr. Giles then had London experience, and was for a time at Lea & Perrins's, of Worcester. Clifton, when Mr. Giles returned in 1821, was an insignificant suburb of Bristol, and was in the midst of a serious building slump. Mr. Giles, however, with a capital of about 100*l.*, managed by perseverance to build up the most important business in Clifton. Mr. R. B. Giles died in 1870. He had been assisted for some years by his son, Richard William Giles, who had been apprenticed to him, and had passed the Major in 1847. Mr. R. W. Giles served on the Council of the Pharmaceutical Society from 1853 to 1856, and was at one time an examiner. He was best known as a critic of the Society at the annual meetings. Mr. Giles, in the latter part of his career, studied law, and on account of his abilities in financial matters was of great service on the board of the Great Western Railway. He retired from the Clifton business in 1881, and died in 1897. Mr. James Walter White, the present proprietor of the business, joined it during the time of Mr. R. W. Giles. Mr. White served his apprenticeship with the late Mr. T. B. Groves, of Weymouth, and was afterwards an assistant at Messrs. Allen & Hanburys', Plough Court, E.C., during which time he formed the lasting friendship of Daniel Hanbury.

MR. HENRY FOX WHITE.

MR. DANIEL HANBURY WHITE.

On the retirement of Mr. R. W. Giles an amalgamation was made with the business which Mr. George Frederick Schacht had carried on for some years with Mr. A. Towerzey at Regent Street, Bristol. Mr. Schacht was apprenticed with Savory & Moore, and passed the Major in 1845, his certificate being No. 2. He was a member of the Pharmaceutical Council for some years, and Vice-President from 1879 to 1882. Mr. Schacht was also President of the British Pharmaceutical Conference in 1878 and 1879. As the inventor of liquor bismuthi and glycerinum amyli his name will be remembered in pharmacy. He died in 1896, and Mr. A. Towerzey, who managed the liquor bismuthi department died in 1899, leaving Mr. J. W. White the sole partner. A portrait of Mr. White as Chairman of the local committee of the British Pharmaceutical Conference, was given in the *C. & D.*, July 11, page 53. We give also the portraits of Mr. Henry Fox White, F.C.S., pharmaceutical chemist, and Mr. Daniel Hanbury White, pharmaceutical chemist, who are associated with their father in the management of the Clifton business

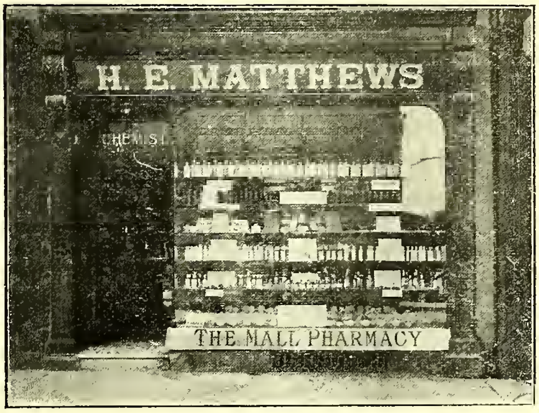
GILES, SCHACHT & CO.'S PHARMACY, CLIFTON.

The sketch of the premises shows the retail pharmacy, the smaller building adjoining being the warehouse and steam-laboratories where the famous liq. bismuthi (Schacht) is made. The apprentice-roll of Giles, Schacht & Co. contains the names of many distinguished pharmacists, and who can deny that the early training of a chemist under such conditions contributes more than anything to shape his subsequent career of usefulness and gives him an advantage over his less fortunate brethren?

THE MALL PHARMACY,

MR. H. E. MATTHEWS.

carried on by Mr. H. E. Matthews, pharmaceutical chemist, is quite a model pharmacy. It is fitted in dark mahogany, and everything is clean and brightly polished. The business was established some seventy years ago by a Mr. Hale, and subsequently owned by Mr. Isaac and Mr. Mortimer. From the last-named Mr. Matthews bought the pharmacy in 1899. It is fitting that this should be a model establishment, for Mr. Matthews is one of the minority of Pharmaceutical Society examiners actually engaged in retail pharmacy. Mr. Matthews was a junior at Cirencester when, in 1896, he gained a Bell scholarship. His career at the Square was a successful one, four silver medals and two bronze ones falling to his share during the junior and senior courses. Mr. Matthews passed the Major in April, 1898, and was appointed an examiner in 1901. At this model pharmacy all galenicals are home-made, and, as Mr. Matthews told the writer, although it involves much more trouble it is well worth it from the satisfaction one feels at being able to personally guarantee all pharmaceutical galenicals. Mr. Matthews is chemist to Clifton College and treasurer of the Bristol Naturalists' Society. If heredity counts for anything, the bonny youngster we saw at the Mall Pharmacy should be a pharmaceutical prodigy, for both its parents are pharmaceutical chemists—Mrs. Matthews being a pharmacist and Bloomsbury graduate as well as Mr. Matthews. Mrs. Matthews is an active member of the Ladies' Local Committee, and it is the first time in the Conference annals that a lady pharmacist has figured thus.



THE MALL PHARMACY, CLIFTON.

At the corner of the West Mall is the pharmacy of Messrs.

SLEIGHT & WARNER

owned by Mr. Fred Sleight. The business was founded in 1833, and the solidity and beauty of the fittings tell of times when cheapness was not the sole desideratum in pharmacy. The style and appearance of the fittings—in solid Spanish mahogany—give this pharmacy a distinction amongst West Country businesses. Mr. Sleight has been in the business for some fourteen years. His apprenticeship was served at Louth, and subsequent assistantships include a term with Messrs. Jameson & Curtis, at Hastings. It was after passing the Minor in 1889 that Mr. Sleight settled at Clifton.

New Books.

Andes, L. E. *Oil Colours and Printer's Inks: a Practical Handbook, treating of Linseed Oil, Boiled Oil, Paints, &c.* Transl. from German. 56 Illus. $7\frac{3}{8} \times 4\frac{7}{8}$. Pp. 226. 5*s*. net. (Scott & G.)

Army Medical Department—Report for 1901. Vol. 43. 8vo. 1*s*. 6*d*. With Appendix, 8vo. 2*s*. 4*d*. (Eyre & S.)

Cautley, E. *The Natural and Artificial Methods of Feeding Infants and Young Children.* 2nd ed. $7\frac{5}{8} \times 4\frac{7}{8}$. Pp. 430. 7*s*. 6*d*. (Churchill.)

Cordingly, W. G. *First Years of Office-work.* $6\frac{3}{4} \times 4\frac{1}{4}$. Pp. 84. 2*s*. (Effingham Wilson.)

Fawsitt, C. E. *Tables for Students of Quantitative Chemical Analysis.* 8vo. 1*s*. 6*d*. net. (W. F. Clay.)

Greenish, H. G. *Microscopical Examination of Foods and Drugs.* 10*s*. 6*d*. (Churchill.)

Haig, A. *Uric Acid as a Factor in Causation of Disease.* 6th ed. Illus. $9 \times 5\frac{5}{8}$. Pp. 964. 15*s*. (Churchill.)

Holah, Ernest. *Double Entry, or the Principle of Perfect Book-keeping.* $7\frac{1}{2} \times 5$. Pp. 71. 2*s*. (Effingham Wilson.)

Lodge, O., Sir. *Modern Views on Matter: the Romanes Lecture*, 1903. 8vo. Sewed. 2*s*. net. (Frowde.)

Massee, G. *Text-book of Plant Diseases caused by Cryptogamic Parasites.* $7\frac{3}{4} \times 4\frac{7}{8}$. Pp. 484. 5*s*. net. (Duckworth.)

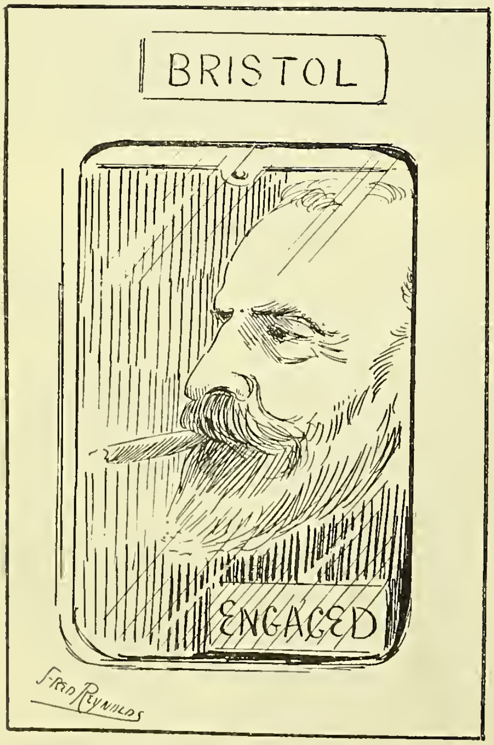
Osler, W. *Principles and Practice of Medicine.* 4th ed. Price reduced to 7*s*. 6*d*. net. (Pentland.)

The Kaleidoscope.

This Week and Next.

While everyone else throws off burdening care,
There is one who has just cause to mourn ;
For when he is "here," he must also be "there,"
Or someone is shouting for "Boorne."

The poor local sec. is harassed night and day,
He is seared with contumely and scorn :
As he scribbles and wires we imagine him say :
That he wished he had never been Boorne.



But he smiles and is patient till success is won,
Though furrows his forehead adorn ;
But perhaps when the B.P.C. meetings are done
He'll exist in a quieter Boorne.

Rolling down to the West Countree,
Bound for the port of Bristol,
To guide the Stars of the B.P.C.
(For this is the year they are ruled by me)
In their search for the hidden crystal.

The crystals hid in the master-minds,
Or crushed in a wedgwood mortar,
Or that lurk in speeches of various kinds,
And firm as the Federation binds
Pale *savants* from every quarter.

The ancient port with a welcome smiles,
And the shops with their polished faciæ ;
For Pharmacy famed hath spread her wiles,
And Botany with skill beguiles,
'Mid the barks of the *Salicaceæ*.

[The first sketch shows Mr. Boorne, local Secretary of the B.P.C., and the second Mr. Idris, the President of the Conference, to whom the last three verses apply].

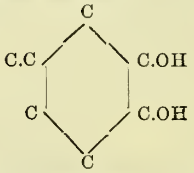
Scientific Progress.

Ipecacuanhic Acid.—Kimura has investigated this constituent of ipecacuanha-root (*Apotheker Zeitung*, 1903, 451), and finds it to be a glucoside acid, of the formula $C_{17}H_{26}O_{10}$. It does not appear to be of any great value in dysentery, so that it cannot be regarded as an active principle of de-emetinised ipecacuanha.

New Cinchona-derivatives.—F. Bayer & Co. have obtained a patent (D.R.P. 137207) for the preparation of salicylic derivatives of the alkaloids of cinchona. The alkaloids are heated with salicylide in chloroform under pressure at 150° C. By this means salicyl-derivatives of the bases result. Salicyl-quinine melts at 140° C., salicyl-cinchonidine at 65°–70° C.

Alkaloids of Dicentra Formosa.—Heyl (*Arch. du Pharm.*, 1903, 315) has examined the alkaloids extracted from the rhizome of *Dicentra formosa*, and has isolated a base melting at 169° C. which is not apparently identical with any other known alkaloid. A second base, melting at 142·5° C., has also been isolated, but the greater part of the crude alkaloids was found to consist of protopine melting at 201°–202° C.

Suprarenin.—According to Von Fürth (*Apotheker Zeitung*, 1903, 459), suprarenin is a cyclic compound of the formula $C_9H_{13}NO_3$, containing the complex



Its constitution is probably $CH_3.N.C_2H.(OH).C_6H_6(OH)_2$.

The Chemistry of Globularia Alypum.—R. Tiemanu publishes an exhaustive account of his work on the constituents of *Globularia Alypum*, a plant the leaves of which are largely used in Southern Europe as a purgative and emetic (*Arch. du Pharm.*, 1903, 289). From an ethereal extract he obtained globularic acid, a crystalline substance melting at 228°–230° C., of the formula $C_{26}H_{32}O_7$, and picroglobularin, an amorphous bitter substance, of the empirical composition $C_{24}H_{30}O_7$. The alcoholic extract yielded globulocitrin, a compound of glucosidal nature, resembling the quercitrin group of bodies. It has the formula $C_{27}H_{30}O_{16}$, and on hydrolysis yields quercetin ($C_{15}H_{10}O_7$), glucose ($C_6H_{12}O_6$), and rhamnose ($C_6H_{12}O_5$).

Determination of Narcotine and Codeine.—According to Von der Wielen (*Pharm. Zeit.*, 1903, 267), the following process gives an accurate estimation of the amount of narcotine and codeine in opium. Three grams of powdered opium is well shaken with 90 c.c. of ether and 5 c.c. of 10-per-cent. soda solution. After a few hours 3 grams of powdered fused calcium chloride is added, and the mixture allowed to stand for twenty-four hours. Seventy cubic centimetres, corresponding with 2·5 grams of opium, is then separated, and 60 c.c. of the ether distilled over. The remainder is transferred to a separator and extracted with dilute hydrochloric acid. The acid solution is rendered alkaline and extracted with fresh ether. The ethereal solution is dried with calcium chloride, filtered, and the ether driven off. The residue is dissolved in warm 90-per-cent. alcohol (4 c.c.), and allowed to stand for twenty-four hours. The narcotine separates in crystals, and may be dried and weighed. The codeine is determined in the alcoholic liquid by titration, after precipitating traces of resin, and filtering.

Observations and Reflections.

By XRAYSER.

Problems of Taxation

are the fashionable modern craze. In the Cabinet at Downing Street, in the Council at Bloomsbury, and wherever pharmacists come together, concluded convictions are being sought, and philosophic sceptics are enjoying themselves. Apparently the Council's conclusion in favour of masterly inactivity in the medicine-stamp matter reflects the views of a considerable section of the trade, including the sages of North-East Lancashire. The support of this body, backed up by Mr. Pentney, is a little ominous, and it may be noticed that Liverpool, Exeter, Edinburgh, Preston, Hartlepool, and other places, influenced rather by arithmetic than by sentiment, do not "hail with satisfaction" the prospect of paying 150 per cent. duty on the sales of antibilious pills. But even though, as I should judge, that view is held by the majority of wayfaring chemists who cannot convert their penny trade into a sixpenny one quite as easily as is assumed by some lofty advisers, it is opposed by so many of the ultra wise, that I do not think a charge of callous indifference to the interests of its constituents would "lie" against the Pharmaceutical Council this time.

The Original or First Author

of the Medicine-stamp Act was Lord John Cavendish, who was Chancellor of the Exchequer in the ill-assorted and almost immoral coalition-ministry of Fox and Lord North. This was in 1783, the only year that that ministry was in existence. Money was not wanted just then; it was the interval between the American and the French wars, when this country was remarkably prosperous; and the object of the tax was professedly rather to protect regular practitioners of medicine against quacks than to raise revenue. It is interesting to note that in latter days it is the regular practitioners who have pressed most earnestly for its repeal, and the—let us say proprietary-medicine trade, which has supported its retention. Pitt came into power the next year (1784), and he seems to have taken a good deal of trouble with this Act. It was he who introduced the schedule of liable medicines. There are no available records of the yield of the tax previous to 1800. In that year the revenue from it only reached 13,895*l.* in England and 77*l.* in Scotland.

Pitt had Rather a Fancy

for these small out-of-the-way taxes. In the first three or four years of his administration he imposed duties on bricks, on hats, on women-servants, and on shops. The last-named charge was bitterly opposed by Fox and others, and was always unpopular. Pitt insisted that it was a tax which fell ultimately on the public; but the shopkeepers could not see this, and though they idolised Pitt they hated his tax, and as it never yielded 100,000*l.* a year it seems doubtful if they paid it properly. Another very stupid tax of Pitt's, introduced later, was one on wearing watches—10*s.* for a gold one, and 2*s.* 6*d.* for a silver one. This came near to ruining the English watch industry, and was soon repealed. His tax of 21*s.* a year on wearers of hair-powder was a great success. It yielded over 210,000*l.* the first year (1796), and was only repealed in 1869. As late as 1855 there were 997 persons in England who followed the old absurd fashion, and paid their guinea a year for doing so. Pitt's tax on armorial bearings was introduced in 1798 coincidentally with the first income-tax, and both are still cherished among us. But these and the medicine-stamp tax are about the only survivors of that financial period.

The Pata People

are quite justified in thinking well of themselves, and in proclaiming by all available means their valuable services to themselves, and (unfortunately for their balance-sheet) to all and sundry besides. If they could only find a way of limiting the benefits they bestow to those who pay for them they would treble their income forthwith. It can hardly be assumed that the three-fourths or four-fifths of the trade who stand aloof from this association are conscientious objectors to its principles. At present it appears that the retailers on whose behalf the whole work was organised pay less than 500*l.* a year towards its cost, while the manufacturers, on whom all the risk falls, contribute nearly as much.

The C.D.A.

is in a different position. It can easily modify its too lavish liberality and bring its scheme within the bounds of its means. It is a little startling to find that in one year eight justifiable claims, and "others of a more or less bogus character" have been brought against the 2,000 members of this Association. It is difficult to believe that this is not far above the average, but however this may be, it seems clear that on the present rate of subscription no such risk as 500*l.* ought to be taken. I understand from Mr. Glyn-Jones's reply to a subscriber that the directors have tried to re-insure their risks, but cannot do so at the price. I am not surprised. A risk of 100*l.* is as much as the Association can afford to take for the half-guinea subscription, though it might undertake to secure any shareholder who should wish it for a larger amount by re-insurance on the easiest terms. Mr. Glyn-Jones says another 1,000 or 1,500 members would mean that their income would be sufficient for their wants. Perhaps he reckons that he has already booked all the reckless ones. If the new 1,000 or 1,500 make mistakes in the same ratio as the old members, the Association would be better without them.

Bristol

was originally Clifton. It was founded by some Britons from Wales, who called it Caer Oder, which means the city of the chasm: evidently Cliff Town. Robert Ricart, an old chronicler of the fifteenth century, quoted in the Rev. Samuel Seyer's "Memoirs, Historical and Topographical, of Bristol and its Neighbourhood" (1821) tells the story. Bryn, he says, the son of Dyfnal Moelmyd, with his brother Beli, crossed to the Continent, taking some Britons with them. They added some Gauls to their little army, advanced into Italy, and took and burnt Rome B.C. 391. "And after they had this doon the two brethern retorned home into this land of Grete Bretaigne with their Bretonnes and dwelled here togiders in grete joye. And then Brynne first founded and billed this worshipful towne of Bristat that now is Bristowe, and set it upon a litell hill." The accuracy of this record is proved by the fact that the figures of Brennius and Belinus are, or in Mr. Seyer's time were, to be seen on the south front of St. John's Tower, a picture of which forms a frontispiece to Mr. Seyer's work.

DRUGS AND CHEMICALS IN ROUMANIA.—The Austro-Hungarian Vice-Consul at Giurgevo states that Roumania last year imported about 885 cwt. of drugs, chemical products, &c., from Austria, 45 cwt. from Hungary, 3 cwt. from Bosnia, 26 cwt. from Germany, and 23 cwt. from Great Britain. The sale of chemicals, which is not large, is chiefly made to industrial concerns, and consists principally of mineral acids and salts. Drugs and pharmaceutical products are imported for the most part direct from Vienna, Dresden, and Stuttgart. Bandages and cotton wool as well as plasters are supplied by Vienna in fair quantity. Medicinal tablets come from Prague, and sugar pilules from Vienna.

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Finest TART. ACID	Lowst. Cur. Prices	Finest Pure TOILET OATMEAL, SPECIAL	32/ ✠ cwt.
Finest Pure LIQUORICE JUICE	/10 ✠ lb.	Finest ARROWROOT	1/ lb.

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West End Agents, WHEATLEY & SONS, 24 South Andley Street, W., And of all Chemists, Wine Merchants, Hotels, &c.

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A WATERPROOF TISSUE in place of
OILED SILK, GUTTA PERCHA, OR JACONET.

GREASE- AND SPIRIT-PROOF.

NON-ADHESIVE AND PERMANENT

Can be boiled for two hours without injury.

Withstands all Antiseptics.

One-yard Boxes or Fifty-yard Rolls.
36 and 46 inches wide.

JOHN MILNE,
The Galen Manfg. Co., Ltd., LONDON, S.E.

Established 1879.

Vapo-Cresolene

All Chemists selling Vapo-Cresolene should write for information about the eight-coloured "Cut Out" window-display we are offering. It is unique, handsome, and refined.

ALLEN & HANBURYS Ltd. (AGENTS), 37 Lombard St., E.C., London, Eng.

JEWSBURY & BROWN'S
MINERAL WATERS
ARE THE [1]
VERY BEST.

By Appointment to King Edward VII.

Ardwick Green, MANCHESTER.

See Inset between pages 32 *and* 33.

"Trifles make perfection, but perfection is no trifle."

If you aim at perfection, use

Fletchers' Concentrated Liquors

Revenue Matters.

Since the Board of Inland Revenue's intimation in regard to ailment-names, we have been frequently asked how

Naming Remedies. matters will stand as regards preparations made according to formulæ which have been published in The Chemist and Druggist and The Chemists' and Druggists' Diary. We put the matter to the Board, and have received the following reply:

Inland Revenue, Somerset House, London, W.C.
July 20, 1903.

Sir,—In reply to your letter dated the 10th inst., I am directed by the Board of Inland Revenue to acquaint you that the fact that an article is prepared in accordance with a formula which has appeared in The Chemists' and Druggists' Diary, and that a statement to that effect is made on the label, will be accepted as evidence that the preparation falls within the category of "known, admitted, and approved" remedies, unless the original vendor made it dutiable.

The Board cannot, however, take the same view with regard to formulas which appear from time to time in The Chemist and Druggist.

I am Sir, your obedient servant,
E. E. Stoodley, Secretary.

The Editor, "Chemist and Druggist."

This substantially carries out the principle of the Board's ruling as to well-known books of reference. Our Diary comes within that category, but The Chemist and Druggist itself is a registered newspaper or periodical, and is therefore outside the definition. A very large number of valuable formulas have been published in our Diary, and, together with those which are contained in that well-known book of reference, "Pharmaceutical Formulas," they cover the whole field that is affected by the Ransom *v.* Sanguinetti decision as modified by that of Farmer *v.* Glyn-Jones. We have been asked if formulas published in the price-lists issued by wholesale firms will be recognised—that is, if such a declaration as the following would be regarded as a full disclosure:

Cough-mixture.
Prepared according to Jones & Smith's formula.
Sold by John Robinson, qualified chemist, &c.

We consider that a price-list would be ranked with The Chemist and Druggist as a periodical publication, while the manner of putting the reference suggests proprietary character. Perhaps some wholesale firm who have been in the habit of publishing such formulas for non-liable medicines will get the opinion of the Board on the point, so that it may be definitely settled.

Liability. We have been reading a good deal of strange assertions in daily papers about the new departure, amongst the paragraphs being the following, which we quote from a letter by "Vigil":

> If a label is sent to Somerset House for information as to liability, at one time it will be returned marked not liable. Another time the same label will be returned marked liable.
>
> A Philadelphian lawyer could not understand what is liable and what is not liable to stamp-duty.

We have not much sympathy with the first paragraph. It is one of those irritating exaggerations which are reiterated without thinking. Tens of thousands of labels have been marked by the Inland Revenue Stamps Department since the late Chemists' and Druggists' Trade Association secured this privilege seventeen years ago, and we have not seen or heard during the period of a hundred labels which have been marked differently on different occasions. The second paragraph touches the spot, however, and we are indebted to Messrs. F. Newbery & Sons for timely examples. They submitted the subjoined labels to the Stamps Department, and these were returned marked as indicated:

Liable to Duty.
Sugar-coated
Little Laxative Granules
(Blissett).
Dose: Six to seven years, one granule; seven to fourteen years, two granules; adults, two to three granules.
As a digestive, one granule before or after dinner.

Not Liable to Duty.
Little Tonic Pearls.
A purely vegetable medicine.
Promotes digestion.
May be taken at any time by persons of all ages and constitutions, in doses from one to four pearls.
One taken every day after dinner forms an excellent digestive.

The letter accompanying the marked labels is signed by Mr. E. E. Stoodley, and it refers to the marking "in so far as the liability is dependent on the terms of the label in each case." Why are the little laxative granules liable to duty? Our impression was that it is on account of the word "Blissett," but then we recollected that years ago the Board permitted Godfrey's cordial (which is actually named in the schedule of dutiable articles) to be sold as "The Cordial (Godfrey)." As we are busier than usual this week, we pass on the problem to our readers, asking them to be good enough to express their opinions as gently as possible on postcards.

Must State Quantities. The question of what is a full disclosure has now been definitely settled. The following label was submitted to the Board, and it was returned marked "Liable to duty":

Compound Pepsine and Bismuth Mixture
OR
TONIC DIGESTIVE-MIXTURE.

A most effective combination of the purest form of the natural digestive agent, Pepsin, with the most reliable Tonics.

Cures Indigestion in all its various forms. Wind on the Stomach, Swelling after Meals, Flatulence, and Spasms are all quickly relieved.

A Sovereign Remedy in Indigestion and Dyspepsia, and other similar complaints.

COMPOSED OF

Liquor Bismuth, B.P. Tincture Nux Vomica, B.P. Spirit Chloroform, B.P., Hydrochlorate Morphia, B.P. Dilute Hydrocyanic Acid, B.P., and Pepsine, B.P.

Sweetened and flavoured with Orange.

Dose.—A teaspoonful in a little water three times a day, immediately after meals.

PREPARED BY
W. FORSTER, Pharmaceutical Chemist,
30 *Church St., SEAHAM HARBOUR.*

The Board's covering letter (No. 24806 S./1903), dated July 15, is in the following terms, and confirms what we have said from the outset:

Gentlemen,—With reference to your letter of the 1st instant, I am directed by the Board of Inland Revenue to return the duplicate of the label forwarded by you in the case of the "Tonic Digestive-mixture" marked "Liable to medicine-stamp duty"; and to explain that if it is desired that the medicine should be brought within the scope of the exemption from duty in the Act 35 Geo. III., cap. 150, in favour of "known, admitted, and approved" remedies, the quantities of the various ingredients should be stated in the label. I am, Gentlemen, your obedient Servant,
E. E. Stoodley, Secretary.

Methylated Liniments. In our issue of June 6 we replied to a correspondent who asked about the legality of the making and selling of methylated liniments without a licence for retailing the spirit; and in our reply the phrase "make or sell" occurred, instead of "make and sell." We have, in consequence, received several letters regarding the matter, and in reply to a correspondent last week (page 104) we gave a fuller statement of how the matter stands as regards those who receive and sell methylated spirits. We have since received from Mr. J. R. Hewitt, of Seven Sisters Road, N., the following copy of a letter received by him from the Board of Inland Revenue on June 27:

Sir,—In reply to your letter of the 12th inst., I am directed by the Board of Inland Revenue to acquaint you that while their authority would be required for making soap-liniment from methylated spirit, no such authority nor a licence to retail methylated spirit would be required to sell a soap-liniment so made. I am, &c.,
J. P. Byrne,
Mr. J. R. Hewitt. Assistant Secretary.

An Excise officer has informed a wholesale house that "directly methylated spirit is made into a liniment it ceases to be methylated spirit, and the Board of Inland Revenue have no right to compel the vendor to take out a licence." This latter statement must be taken with reservation, but the whole matter comes back to the original question, Can a retail chemist who has no methylated-spirit licence make or sell methylated liniments? It is this question which the letter above quoted replies to. By Section 120 of the Spirits Act, 1880, the Commissioners of Inland Revenue are empowered to "authorise any person to receive methylated spirits from an authorised methylator for use in any art or manufacture carried on by him." This section, therefore, permits chemists who are not licensed retailers of methylated spirit to get the necessary authority on special application to Somerset House, while in the case of those who have the methylated-spirit licence, advantage can be taken of the General Orders issued by the Board at various times permitting the use of methylated spirit in making soap, aconite, belladonna, and compound camphor liniments Their licence is the authority to receive the spirit, and the Board have never required them to ask for special authority to use it in the liniments mentioned. We may add that the Board also allow methylated spirit to be used in the manufacture of other preparations, such as horse and cattle medicines, varnishes, polishes, &c., if made up in such a manner or so compounded as not to be capable of being used internally as medicines by human beings. In each case a special application must be made (by licensed retailers as well as others), and the formula of the composition stated Methylated spirit may not be used in the manufacture of such preparations until the special permission of the Commissioners has been obtained, and such security given (usually by bond) as they may require for the proper use of the spirit.

Patent Medicines in Germany.

For many years in Germany proprietary-medicine manufacturers and the chemists who supply their products to the public have been severely handicapped by the innumerable more or less petty regulations and restrictions which a fatherly Government has imposed, ostensibly for the public weal, and numerous steps have been taken by the police authorities in different towns to carry on the war against these medicines. With very little discernment, and often in very aggressive and spiteful language, the public were warned to avoid this and that remedy, advertised for as many shillings as they were worth farthings, and the sale of the articles named was forbidden by the apotheker. More recently a restriction was put on the makers of proprietary medicines, so that only those articles could be sold of which the composition was exactly known and which contained nothing injurious to health and were absolutely free from potent or narcotic drugs. In consequence of all these decrees the trade in proprietary articles in Germany has been chaotic, especially as the conditions of sale differ in almost every town and district. For some time it has been known that efforts were being made to reduce to uniformity the conditions all over the Fatherland, and, as the first result, the Senate of Hamburg has just made regulations which will in all probability be adopted by the various other States constituting the German Empire. The Hamburg authorities give a list of ninety-five proprietary articles which must not be advertised on and after January 1, 1904.

The list contains ninety-five articles; amongst others:

American cough cure
Schiffmann's asthma-cure
White's eye-lotion
Battle's bromidia
Ayer's cathartic pills
Morison's pills
Albert's remedy

The following are to be supplied only on a prescription:

Thierry's balsam
Elliman's universal embrocation
Laton's remedy
Mother Seigel's pills and syrup
Pastor König's nerve-tonic
Warner's safe remedies
Ayer's sarsaparilla

Special instructions are laid down for the chemist in regard to their sale, contravention of which may lead to a penalty of 150m. (7*l.* 10*s.*), or a corresponding term of imprisonment. The chemist has first to see that the manufacturer's name and the name of the article itself appear on the medicine and on the wrappers; besides this either the wrappers or the article itself must contain the name of the chemist who sells the article and the price at which it is sold. Neither the article itself nor its wrappers must contain anything which advertises or recommends the article; even prints of letters from grateful patients or other reference to the preventive or curative powers of the medicine are to be forbidden. Besides, the composition of the remedy must be known to the chemist who sells it, and if it contains anything which falls in with the regulations of potent drugs, it can only be sold to the public through a physician's prescription, and must be kept labelled in the apotheke "Only to be sold by prescription." The measure is not likely to be very effective, because innumerable preparations are not named in the list. The selection of what is a quack medicine and what is not is left to the discretion of the authorities, who can call a proprietary medicine a prohibited quack remedy if it is not in the German Pharmacopœia or not generally recognised in medical science.

These rigorous regulations, coming at a time when British pharmacists are feeling the irksomeness of a century-old law, serve to show that modern sentiment, as it is interpreted in Germany, is not a thing to appeal to. The curious point in connection with the matter is that the German public do not appear to demand the interference in this manner. They are fond of a proprietary article now and then, and the quack doctor—*i.e.*, the unqualified medical practitioner—flourishes exceedingly there. So far as the influence of the new regulations on the sale of British proprietary medicines in Germany is concerned, it may safely be said that there will be little change. The heavy Customs duty imposed upon them effectually kills any business that might be done there, and the demand that exists for such articles as Elliman's embrocation arises from their merits having travelled so far, or through the requirements of Britishers living there. The German authorities appear determined that people will not get what they want, and we pity the chemists who have to stand between them and the public The extreme of repression is really worse than the enduring permission which we enjoy.

Resurrection.

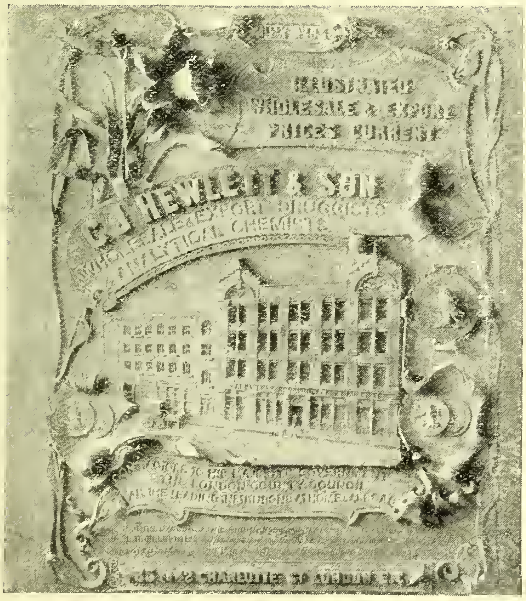
The Islington people are determined to lead the country in regard to Sale of Food and Drugs Acts administration. Failing to get a conviction of Parke's Drug-stores for selling iron pills, they have again purchased from them and are taking the Blaud tack now. We must not discuss their policy while the case is *sub judice*; indeed, we merely wish to refer to Mr. Bramall's "unearthing" of Dr. Blaud's nephew. The remark shows how carefully he reads The Chemist and Druggist, for it was a recent letter by Mr. Joseph Ince in our pages which brought home the fact that Blaud's pills are still a proprietary article. As Section 6 of the 1875 Act does not apply to proprietary medicines, Monsieur Blaud's evidence might help us into a pretty legal tangle; in fact, the legal possibilities seem endless.

Notes on Novelties and Other Matters.

Proprietary Articles.

THE birth and death rates of proprietary articles which chemists handle is annually reported to us by Messrs. F. Newbery & Sons in their catalogue of druggists' sundries, proprietary articles, perfumery, &c. The twenty-third annual issue of this combined catalogue records the removal of 298 entries from the proprietary goods section: these are as good as dead if Messrs. Newbery do not handle them. But 318 articles have been added, and the quotations of 757 have been modified. Two pages of the list are eloquent of the growing nature of one important department of the chemist's trade—viz., soaps. These show that Messrs. Newbery have nearly one hundred and fifty kinds in stock. We wonder if chemists as a body realise how valuable a portion of their business this is. Some do not, by showing lordly indifference to the advertising that is going on in the newspapers, and the result is that grocers are picking up the trade. It is a good thing for every man to make a feature of "his own," but it is bad business not to meet regular demand for popular articles, and thus divert the custom to other quarters. This is by the way. Messrs. Newbery's catalogue is in the Press, and any *C. & D.* subscriber will get a copy of it on application.

An Artistic Price-list Cover.



THIS engraving almost speaks for itself. It is photographed from an excellent piece of clay-modelling, and it encloses a list which any of our colonial subscribers may obtain on application to Messrs. C. J. Hewlett & Son at Charlotte Street, London, E.C.

Clear Air and Milk Emulsion.

WE learn from the *C.D.A.* that at a meeting of delegates from the metropolitan and country Boards of Health, in the Town Hall, Adelaide, S.A., convened by the East Torrens County Board of Health recently, to initiate a movement to prevent the spread of tuberculosis, Councillor Dr. Angus Johnson spoke strongly in favour of the open-air cure, and stated that he had sent three persons to the hills, where the pure clear air, in combination with Faulding's milk emulsion [of cod-liver oil], had worked perfect cures.

Lactophenin in Typhoid Fever.

WE are indebted to Messrs. David Thom, Domeier & Co. (Limited), 13 St. Mary-at-Hill, London, E.C., for a copy of an article by Mr. C. Frhr. v. Schuler, resident medical officer to the Evangelical Hospital at Gelsenkirchen, on the treatment of typhoid fever with lactophenin. It will be remembered that lactophenin is manufactured by Messrs. C. F. Boehringer & Soehne, and that it is considered by physicians to be dangerous to administer synthetic antipyretics in typhoid fever, owing to the risk of collapse. Dr. von Schuler has treated 450 cases with lactophenin, giving 1 to 2 grams per day, and the pamphlet records his results. He says:

> We have not seen collapse to ensue after the dose given by us; we gave, it is true, analeptics at the same time in cases where the pulse was in an abnormal state. A change of the pulse for the worse under the action of lactophenin was not observed by us, although we paid particular attention to this very point. The action of antipyrine and antifebrin in that respect is well known. Respecting respiration and cyanosis of our patients there has been observed no change for the worse that could be attributed to the action of lactophenin.

Wellcome Physiological Research Laboratories.

WE are indebted to Messrs. Burroughs Wellcome & Co., for a copy of an illustrated pamphlet descriptive of the above-mentioned laboratories, and containing besides useful information respecting the production of antitoxic serums, and also comments on the cancer-problem. We understand that any of our subscribers may obtain a copy on application.

Photographic Apparatus.

MESSRS. F. DARTON & CO., 142 St. John Street, E.C., have published an illustrated list of photographic apparatus and accessories, in which each article is illustrated and described, the prices being those at which the articles retail. It can thus be used to distribute to customers. The firm make a speciality of cyclist and motorist goggles and tinted spectacles, and as there is a good business now doing in these, chemists should get a share of it. It does not offend the susceptibilities of those medical purists who think that the chemist has no business to test people's eyes for spectacles.

Essential Oils and Synthetic Perfumes.

MR. W. MALLMANN, of Ruremonde, Holland, is a manufacturer of synthetic perfumes and distiller of essential oils, some of which are already well known, while others are special manufactures. Amongst the latter is artificial musk, made according to a process which was referred to in a recent article in THE CHEMIST AND DRUGGIST, the principle of which is *sui generis* and the patents Mr. Mallmann's property. The 100-per-cent. product is offered as well as a weaker one, at remarkably low prices. Both merit the attention of soap-makers, to whom we also commend the crystalline nerolin, heliotropin, yara yara, and cumarin. Amongst the materials which are used alike in perfume-compounding and in soap-manufacture are jasmin, aubepin, ylang-ylang (synthetic, but remarkably similar to the natural oil), terpineol, pure citronellol, lyseol (a distinctive and original odour), œillet, magnolia, and niobe (methyl benzoate, a cheap soap-perfume). Mr. Mallmann makes a speciality of esters like the last, including the amyl products, and of eugenol, citral, and terpeneless lemon oil. Large consumers of any of these products may obtain samples and price-lists on application to Mr. Mallmann at the address given. This is the first occasion that we have had the opportunity of calling attention to products of this character manufactured in Holland, and the circumstance suffices to show that Germany has not a monopoly in this branch of chemical industry.

Varia.

We refer in the succeeding column to the new photographic-intensifier which Messrs. F. Newbery & Sons, of Charterhouse Square, E.C., have introduced under the name "Expho," and as a companion to it they are offering the "Charterhouse" one-solution developer, which is equally suitable for plates, films, and papers. It retails at 6*d*. In sundries on the pharmaceutical side they have popular lemonade crystals ("Niagara") which retail at 3½*d*. The bottle is put up in a nice carton. Another good line is "St. Paul's" antiseptic tooth-soap in pink celluloid cases (retails at 6*d*.), and to use with that there is a clever novelty in the shape of a rubber tooth-brush, which slips on the finger like a finger-stall. These brushes are put up in glass-top show boxes of a dozen at 2*s*. 6*d*. They should sell at sight.

"Icilma" Preparations.

It is a few years since these were first brought to the notice of the trade, "Icilma" being the coined name of an Algerian natural mineral water of antiseptic properties. By steady advertising they have met with public favour, and are now in regular demand, but the individual items mentioned on the P.A.T.A. list are so numerous that some chemists hesitate to stock them, with the result that the Icilma Company, 142 Gray's Inn Road, W.C., are getting rather a large postal demand, which they would prefer should be satisfied locally. They therefore ask us to state that retail chemists may with confidence stock the following articles, because they are in regular demand—viz., "Icilma" natural water, 1*s*. size and 6*d*. pocket-size (antiseptic) in sprinkler bottle; "Icilma" fluor-cream, 1*s*. size, and the 6*d*. and 1*s*. sizes of the soap. Minimum prices are fixed for all these, and the co-operation of retailers in maintaining the prices is solicited.

"The Travelling Partner."

The last issue of this advertising quarterly, published by Smith's Advertising Agency, 100 Fleet Street, E.C., is well worth getting by those who have not seen it. We understand that the publishers will send a copy to any *C. & D.* subscriber who asks for it. It contains good hints on advertising, and Mr. Thomas Smith has the place of honour with the story of the quarter of a century he has spent in London as an advertising expert. From this we gather that his brains and a chair and table were his stock-in-trade when he started in St. Bride's Court on June 10, 1878, and now his advertising business employs many experts and several branches. Most significant of all is this statement:

> To these branches again may be added proprietary articles which have either been initiated by the Agency, or shares bought and a controlling influence obtained. This is particularly the case with Newham & Co.'s feather factory, Boston; Omega (Limited), Page Woodcock (Limited), &c., &c.

It is worthy of note that Mr. Smith has never written an advertisement for whisky or any other intoxicating drink, tobacco, betting business, or shady physic, and he won't.

Garvens' Pumps.

The English trading-rights in these pumps have been acquired by the Berkefeld Filter Company (Limited), 121 Oxford Street, W. A special list is published, the pumps figured being of various patterns, and suited to a variety of purposes.

Photographic Notes.

By a Pharmaceutical Camerist.

The Awakening.

In a circular which is being sent out by Kodak (Limited) it is stated that the policy of preferential discounts has been proved to them to be contrary to the wishes of a considerable proportion of their trade customers, and has been cancelled.

Imperial Films.

The new productions of the Imperial Dry-plate Company are meeting with favour in my district. Amateurs regard the quality of the Imperial plates as a guide for the new films, and are not far wrong. The Imperial roll-films are made to fit all daylight-loading roll-film cameras.

Picture-postcards.

Messrs. W. N. Cooper & Co., chemists, West-End, Kimberley, and Mafeking, send a selection of photographic postcards which are finding favour in South Africa. The cards in Messrs. Cooper's series have on them views of Mafeking, and, selling at three for 1*s*., are fairly profitable. I am hoping to get further particulars of the method of production.

Ozotype.

Mr. Thos. Manly has recently issued new instructions with his Ozotype papers, the chief improvement being the recommendation to use hydrochloric acid in place of sulphuric acid in the developer. Formulæ for the developing-solution are also given, suited for three qualities of negative, the amount of ferrous sulphate varying from 25 gr to 45 gr. in 1 pint.

To Help Business.

Messrs. W. Watson & Sons, 313 High Holborn, W.C., are sending out some capital showcards in the interest of Watson's enlargers. In the centre of each card there is an actual enlargement, made either from a Brownie, F.P. Kodak, quarter-plate, or 5 × 4 negative. The enlargers, which are good selling lines, are sure to increase in popularity where actual results, such as are given on these showcards, are shown.

Houghton's List

is bigger than ever. The new edition which I received last week contains about eight hundred and eighty pages, and I am told it contains over twelve hundred illustrations. The latter fact I take for granted, as I cannot spare the time to make a count. It is the most complete list offered to the photographic trade, and chemists who have not had a copy should address an inquiry to Messrs. G. Houghton & Son (Limited), 88 and 89 High Holborn, W.C.

Against Monopoly

is the tone of the letter which I, in common with other dealers, have received from Wellington & Ward, Elstree. There has been considerable discussion in certain quarters as to whether the Kodak Company should be encouraged in their desire to do a general wholesale photographic trade. Messrs. Wellington & Ward believe that a company which places restrictive conditions of sale are not working for the general welfare of the trade, and they have refused to supply them with the Wellington goods.

"The Chemists' Photo-stores."

Messrs. Francis Newbery & Sons, Charterhouse Square, E.C., have just issued a new edition of their photographic catalogue. The list contains particulars of all photographic goods, and sections are devoted to electrical apparatus, watches, and fountain-pens. The prices given are those at which the goods sell retail, a discount-table supplying the key to the wholesale prices. A recent introduction is the "Expho" intensifier, which, judging from specimens sent, does its work well, and should be in good demand.

Radium in Medicine.

By F. Harrison Glew.

It would be well for every pharmacist to make himself practically acquainted with the truly marvellous properties of radium, some of which are so remarkable that any physicist may be excused for doubting without direct experimental evidence. Apart from physical considerations, radium and allied radio-active substances merit the interest of pharmacists from the part which these are likely to play as curative agents in the near future. I feel safe in predicting that such substances will soon find a place in the Pharmacopœia and the Poison Schedule. There can be little doubt that a very small quantity of any radium salt would be fatal, and such substances will probably constitute a new class of physico-poisons, in which the physical action predominates over the chemical, and, judging from the results of such external applications, the serious consequences of a moderate internal dose might not be manifest until about a week after administration. For this reason any physiological experiments must be conducted with excessive caution. Up to the present I have not heard of any of these radio-active substances being used as internal medicines, but it is not too fanciful to suppose that the dispenser may be called upon to prepare medicines for internal use containing so many millionths or even billionths of a grain of a salt of radium. Preparations of radium, which is perhaps the most dangerous and most poisonous substance in the world, would require the greatest pharmaceutical skill and care in manipulation.

If such internal medicines do come into use, the actual quantities concerned may be so small that detection by chemical analysis would be impossible; but the electroscope could be relied upon not only to detect the presence, but to give direct quantitative measure of the amount of radium present.

The chief reason for thinking that radium and similar radio-active substances will be largely used curatively is the undoubted fact that these chemicals emit *x*-rays incessantly. Similar *x*-rays, when generated by the usual electrical apparatus, are now well known to be surprisingly efficacious in the treatment of certain diseases hitherto regarded as incurable. In surface-diseases, such as rodent-ulcer and lupus, the speedy beneficial effects must be seen to be fully realised. It is, therefore, only natural to conclude that similar good results will be obtained by using the *x*-rays from radium. It is true that radium emits other radiations at the same time, and how far these may modify the usual therapeutic effects of *x*-rays remains to be seen. One thing is certain, the cutaneous effect is not diminished thereby, for a direct application of radium for five minutes suffices to produce full *x*-ray dermatitis in some cases.

Most promising therapeutic-work with radium has already been done (mostly in continental practice) by the use of local applications. In Vienna two cases of cancer are reported to have been cured, and many cases are progressing favourably, so that it is by no means too early for the pharmacist to make himself familiar with the very peculiar character of such medicaments, and be prepared to supply these to medical men or their patients.

At first sight it seems incredible that any remedial agent can act without being removed from the hermetically-sealed glass tube which encloses it, but such is the case. I have before me a glass tube containing two little yellow particles, neither larger than a small pin-head; these are pure radium bromide and weigh $\frac{1}{12}$ gr. Yet the particles visibly discharge a gold-leaf electroscope two yards away. I take it into a dark room, and it brightly lights up the spot where it nearly touches the ordinary *x*-ray screen, even half an inch of solid sterling silver does not stop all action on the screen. It will discharge the electroscope, only more slowly, if placed inside an iron mortar the bottom of which is an inch and a quarter thick.

Many interesting and instructive experiments can be made with quite simple and inexpensive apparatus and materials. A piece of Cornish pitchblende, which is the chief ore from which radium is obtained, may be had from any mineralogist for 2*s.* or 3*s.* This heavy black mineral contains minute traces of radium, a ton of the ore yielding 3 gr.

It is only necessary to place this mineral nearly in contact with a photographic plate for half an hour or less, when, upon development, we find decided evidence of photographic action. If the plate is first wrapped in black paper a longer exposure must be allowed, as black paper cuts off 95 per cent. of the total activity, but the 5 per cent left is of a very penetrating character. Fig. 1 shows the effect obtained by thus exposing a plate for twelve hours through a black-paper covering with a piece of pitchblende on it. If a sheet of any metal is interposed these effects can still be obtained.

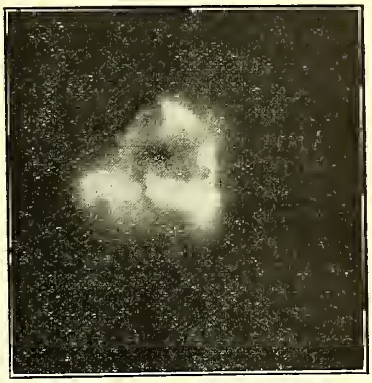


Fig. 1.

Pitchblende will also slowly discharge a gold-leaf electroscope. A useful electroscope can be made out of a glass jam-jar. If the mineral is placed on or near the top plate of the charged electroscope, the leaves will be found to collapse more quickly when the mineral is present; it does not matter whether the charge is positive or negative—the action is the same. *X* rays, however generated, will do the same, this being a characteristic property of *x* rays. A very effective lecture experiment, which demonstrates the power that radium has to facilitate the passage of an electric spark, is thus performed: Two sparking places are arranged in parallel, with the coil or Wimshurst machine, as in fig. 2; small knobs are best, about $\frac{1}{2}$ inch apart for each gap, but the gaps should be at least a yard apart. These two paths are so adjusted that sparks pass freely through both gaps. If pure radium be now brought within a foot or two from either set of knobs, all the sparking will take place through that part, the other set of balls is silent. This curious action is due to the radium

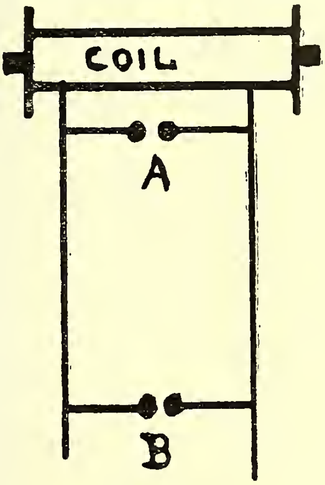


Fig. 2.

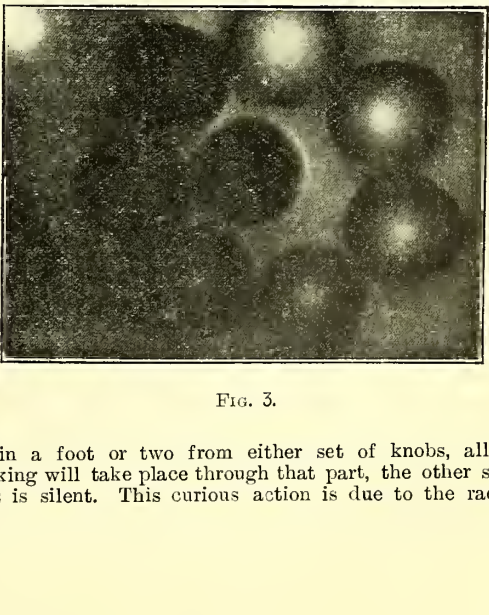


Fig. 3.

converting the air near it into a better conductor by ionisation of the air. If the radium is shut up in a metallic box this action remains.

For many photographic experiments it is not even necessary to procure pitchblende, as we have all got some radio-active bodies amongst our chemical stock. Nitrate of uranium is fairly active, but that portion which is soluble in 0·720 ether is not active. When this is separated by decantation by Crookes's method, the remaining insoluble portion is very useful for experimental work; in fact, one specimen I prepared is about as active as pitchblende.

A convenient photographic method of testing and roughly measuring radio-activity is as follows: Place a special rapid quarter-plate in a black envelope, film uppermost; upon this arrange a few shillings, as in fig. 3. Now place the active substance in contact with each coin, giving one a single second, the next two, and so on, doubling the exposure with each succeeding coin. On development we ought to get a very decided trace of action with two seconds' exposure to radium bromide. The central coin in fig. 3 was not exposed. The electroscope gives more precise measure of potency, because it is sensitive to each of the three or four distinct kinds of radiation present in radium.

Radium is capable of producing fluorescence in many substances not previously known to be fluorescent. I find the following substances are distinctly fluorescent:

Opal glass
Soda glass
Lead glass
Uranium glass
Didymium glass
Celluloid
Mother-of-pearl
Mica
Borax
Alum
Quartz
Sulphur
Sugar
Starch
Fluor spar
Yellow resin
Cotton-wool
White paper
Copper sulphate
Quinine sulphate
Human skin
Human nails
Camphor
Spermaceti
Solid paraffin
Liquid paraffin
Turpentine
Chloroform
Water
Glycerin

I have been unable to detect fluorescence in the following substances; but in some of these it may simply be a question of degree only. Therefore, by using a more powerful source of radiation, or by using a more sensitive detector than the eye, some of these are likely to find a place in the first list:

Potass. bichrom.
Ruby glass (flashed)
Prepared chalk
Ebonate
Silk
Selenium
Plaster of Paris
Quinine iodosulphate
Woods (various)
Camphor monobromate

For these experiments the tube of radium should be wrapped in black paper; if this is now brought near the eye, in a perfectly dark room, the eye seems to be filled with light, which is due to a general fluorescence of all the structures and fluids of the eye. The same action takes place if the eyelid is closed; for this reason any experiments in fluorescence must be conducted at a reasonable distance from the eyes, and without spectacles if possible, as the glass is also affected. If radium is placed on a piece of glass for two days or so a dark patch is produced, which is due to the reduction of the metallic constituents of the glass. This curious action goes right through the glass, and is not merely a surface effect; from the same property any glass vessel holding radium is soon darkened. I have found little cups made of stout tinfoil very convenient for the observation of fluorescence of liquids. The radium is placed under the cup. No light is seen until the cup is filled with the liquid.

The most startling property of radium is that it is continually giving off heat, and that it can so maintain a temperature 5° or 6° F. higher than its surroundings.

The puzzle is, where does all this energy come from? Is the source internal or external? Much experimental evidence goes to show that it is internal, and from these it seems highly probable that in radium we have an example of condensation of the stuff of which atoms is composed, and consequent release of energy, hitherto latent.* By its aid we get a peep into the structure of atoms, and find that a single atom must be a sort of universe in itself, vast and complex beyond conception, a grand storehouse of energy never before dreamt of. At present it is beyond the power of man to accelerate or diminish these internal inter-atomic motions, but a study of radium may give the key to unlock and guide these motions for the benefit of mankind.

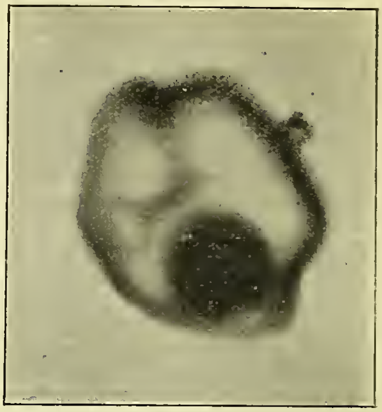
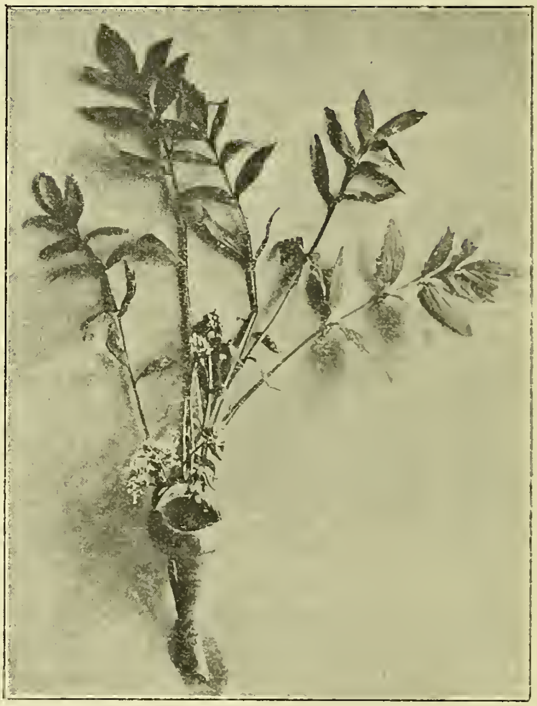


Fig. 4.

Fig. 4 is a radiograph of a purse and contents, obtained by an exposure of twelve hours at a distance of 12 inches, from 5 milligrams of radium bromide.

The mixed character of the various kinds of radiations is indicated by the bad definition; in fact, the radio-active body which gives the worst definition is at present the most interesting to the physicist. In this case the radiant-point was small enough and far enough away to have yielded a much sharper result if the rays had been homogeneous.



A VALERIAN ABNORMALITY.

Mr. H. Bulmer Rudd, Ph.C., of Ripon, sends us the photograph of *Valeriana officinalis* from which the above engraving has been made. The vase-shaped expansion of the stem produced the flower-stalks from the upper lip, also some of the leaves. The specimen is in possession of Mr. Pratt, M.R.C.V.S, Ripon. Mr. W. West, F.L.S., of Bradford, is of opinion that the abnormality is due to there having been a well-nourished rhizome and roots, that had been bitten off by cattle or otherwise when ready for sending up the usual shoots, and that the peculiar formation was due to the efforts made to produce leaves, flowers, and seed.

What we are Coming To.—A pharmacists' assistants' examination, which had been arranged to take place at the end of June at Würzberg, had to be abandoned, as no candidate offered himself for examination.

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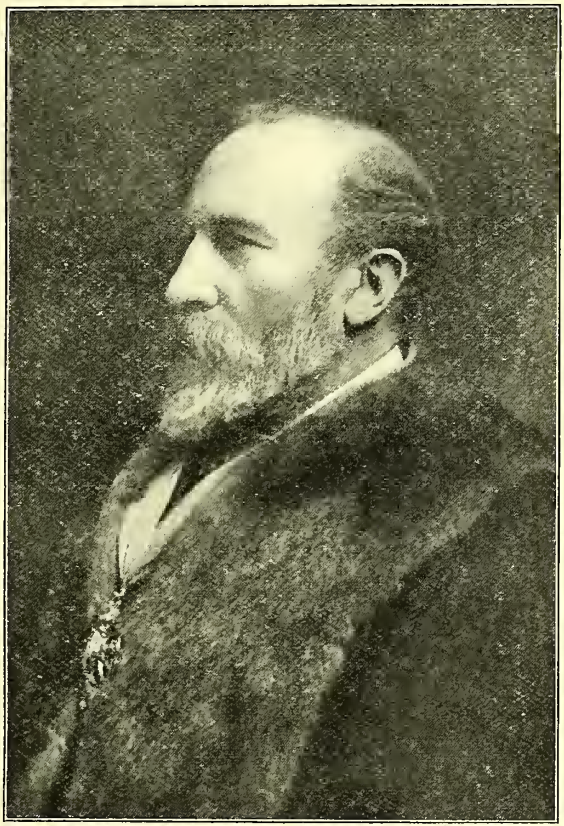
* Since this was written Sir William Ramsay has made his announcement regarding the emanations giving the helium spectrum, but how far this affects these deductions remains to be seen.—Editor.

Thomas Howell Williams Idris, J.P., F.C.S.

PRESIDENT OF THE BRITISH PHARMACEUTICAL CONFERENCE.

It was in the springtime, and before the heat-wave, that a representative of this journal sought Mr. Idris at his company's works in Camden Town. Even then the call interrupted the flow of his dictation, which keeps two stenographers writing every morning until noon; and by the time the interview was over a smart brougham and pair were waiting outside to take Mr. and Mrs. Idris to the League of Mercy reception at Marlborough House. The two hours which our representative spent with Mr. Idris cut out an extra good sample from the day's work of this year's President of the British Pharmaceutical Conference, since he happened to strike business, municipal affairs, philanthropy, and politics; and he could not blind his eyes to the fact that Mrs. Idris—a woman of parts, a good debater and administrator—shares in all except, perhaps, business.



Yours faithfully,
T. H. W. Idris.

Mr. Idris's election to one of the highest honours which British pharmacy can bestow upon her sons was a tribute to personal worth, chiefly known to the Executive, and little understood by the members generally. One glances through the list of Presidents which prefaces the familiar green book, and finds that from Henry Deane (1864–65) to Claridge Druce (1901–2) all the Presidents but one have been pharmaceutical chemists. The exception is Dr. John Attfield, who never went further than the Minor examination; and now, after twenty years, we come back to the chemist and druggist class, and in Mr. Idris find a Minor man who, like Dr. Attfield, did not allow his scientific studies to end there, and who, unlike most of those who have followed pharmacy, has carved a profitable path for his abilities, and reached a position of affluence before he is too tired to attend to business or too old to enjoy the pleasures of life.

The story of his career deserves to be told, irrespective of its topical interest, because it shows so well the

Possibilities of Pharmacy

for those who have energy, ability, and none of the advantages that come through birth and influence. Mr. Idris is not the only man in the craft who owes everything to himself; there are some now in it who will yet achieve as good fortune, we hope; and mayhap Mr. Idris will tell the Conference next week why others have turned to great advantage the opportunities which pharmacy is daily affording for increased knowledge and better circumstance.

Mr. Idris was born "Williams," therefore of a good Welsh stock, at Vallen, Pembrokeshire, in August, 1842. Throughout this narrative we speak of him as Idris, and may, therefore, explain without anticipating the story that in 1893, when the success of the "Idris" table-waters was established, he, by deed-poll, assumed that name as an additional surname—a circumstance not unconnected with the fact that there was another London County Councillor named Howell Williams. It was so natural a change that it seems to us the subject of our sketch has always been Mr. Idris. His father was a Baptist, and when it came to educating the boy, who amply demonstrated that Welsh is not a modern *foreign* language by mastering English perfectly and its literature with promise, the unyielding and aggressive methods of Anglicism and "the Church" catechism induced his too early withdrawal from school. He had not passed his twelfth birthday when he was apprenticed to a draper. The foreman of the shop happened to have stronger views on preferential tariff in the matter of work than was agreeable to the lad, and as the preference fell heavily upon the latter he became a conscientious objector, and the task threatened to be enforced with a yard stick. The lad, in his distress, sought the advice of a cousin who had a druggist's shop in Ebbw Vale, and that good man promptly made him

An Apprentice Druggist.

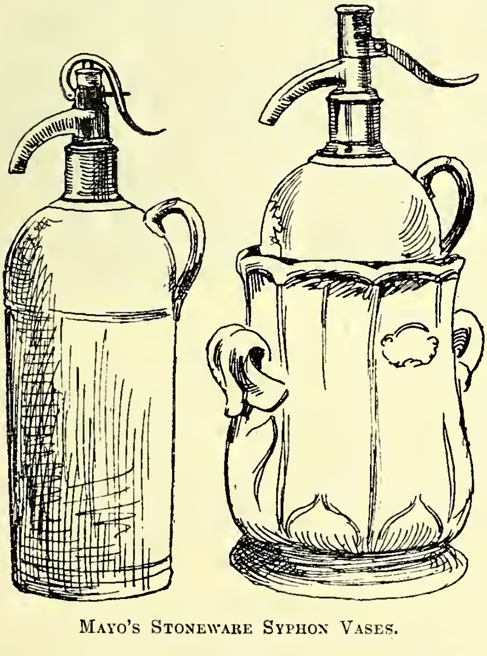
There he remained until he was sixteen, having a good time and sound instruction, then went to another chemist-cousin in Crickhowell, with whom he stayed until he attained his majority. It was there that Mr. Idris got his first taste of the value of scientific method. His Crickhowell cousin was a charming, sympathetic man, and fond of science. He appears to have greatly influenced his young relative's mind, and gave him opportunity for improvement and recreation, the latter including much Volunteering, in the course of which young Idris became a crack shot. After this he had some strange experience as dispenser to a doctor, and it was the recollection of this that prompted him to accept the honorary presidency of the Public Dispensers' Association. From experience he knows what the dispenser's work is, his worries, and the too small pay he gets for it all. The magnetic attractions of London drew Mr. Idris to a post with Messrs. Herrings & Co., in Aldersgate Street, with whom he remained for a year; then a friendship which he had formed with a chemist and veterinarian at Crickhowell ripened into a partnership with the man. They started in business at Brynmawr, Mr. Idris taking into the venture 70*l.* he had saved and infinite faith in his partner, who, as a devotee of Bacchus, ought to have broken that faith, and did in a measure; but the sober partner went off in disgust and rich in experience. The venture lasted a year, and Mr. Idris went back to Herrings'. That was the time when Mr. Charles Umney had charge of Herrings' laboratory, but part of Mr. Idris's duty as head of the chemical-department was to attend early in the morning to start the laboratory-work. By this time he had become engrossed in the scientific side of the calling, and on April 17, 1867, passed the Minor examination. Professor Joseph Bemrose was one of those who passed the same day. Mr. Idris had been studying chemistry at the City College of Chemistry before this. The classes were then held in the London Institution, Finsbury Circus, and Dr. H. E. Armstrong was the teacher. The College has since become the well-known Finsbury Technical College. Dr. Armstrong has found greater scope for his abilities and originality in the Central Technical College, Exhibition Road. He was a good friend to Mr. Idris, and it required little inducement to get him back to the classes. After he had passed the Minor he continued his studies in chemistry and physics, and during the greater part of two terms acted as Dr. Armstrong's demonstrator. It is, we believe, one of Dr. Armstrong's highest attributes that those who associate with him have conveyed to them a remarkable grasp of the principles of chemical science and their application, and this is well shown by Mr. Idris; for although pretension to scientific knowledge is one of the last things that could be said of him, he has been called upon in his L.C.C. work to direct the solution of problems that engaged the keenest intellects amongst English scientists, and his intelligent grasp of the facts and difficulties can be traced back to those years in which he was a pupil at the Technical Institute. But we see the influence of the training all through his career, and in nothing more fully than the equipment of his firm's works in Camden Town, wherein the resources of science and the perfections of mechanical ingenuity, as far as they are applicable to aërated-water manufacture, are concentrated. In 1871 Mr. Idris decided to

Return to the Retail Trade,

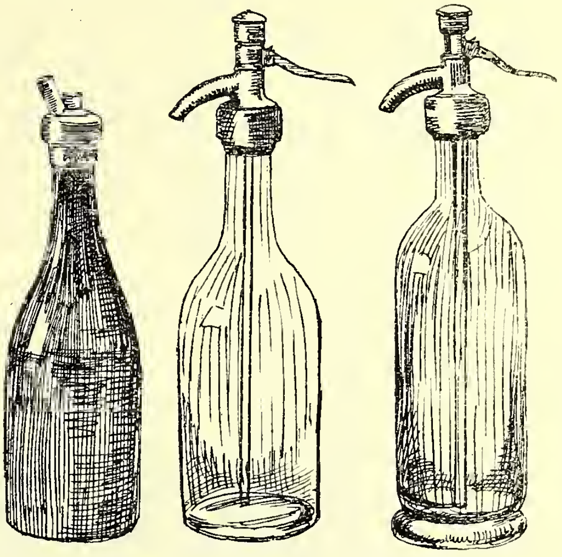
and he purchased a struggling business in Seven Sisters Road, North London. He paid 120*l.* down for this business, and a balance of 30*l.* when he was able to quit Herrings' and enter into sole charge of the shop. Seven Sisters Road was then, and is still, a good residential neighbourhood, but thirty years ago most of the large villas were occupied by well-to-do City men who looked upon their medical attendants as practitioners of medicine rather than as dispensers of physic; and the young Welsh chemist knew that if he were to pull his business out of the rut he would have to show that he could do something else than sell pennyworths. He was one of a small coterie of chemists' assistants who had ambitions to turn their scientific knowledge into a marketable commodity, but not necessarily by sticking up wire window-blinds and proclaiming to the world that they were professional pharmacists. They considered that the nearest road to professional status is to turn scientific acquirement in new directions for the making of new business. The direction was the difficulty; but Mr. Idris thought his medical neighbours should help him if he could them. So he sent a neat circular to the medical men, saying that he could undertake analyses of foods, drugs, urine and other pathological specimens. His returns were not inflated by the effort, but one of the best medical men in the neighbourhood dropped in one evening and told Mr. Idris that a girl had attempted to commit suicide, and he had to give evidence next day before the Magistrate as to the nature of the powder she was supposed to have taken. The doctor had forgotten most of his chemistry, but did not want the Magistrate to know that, and appealed to Mr. Idris to help him. So it was arranged that the doctor should call at closing-time, which he did along with two other medical men. Mr. Idris gave them an excellent demonstration of how to analyse the powder, with a running commentary, and all three were delighted. This was the turning-point in Mr. Idris's retail career. These three medical men became his excellent friends. One gave him the whole of his dispensing to do, and the others sent him customers whom he never would have known had it not been for the lucky evening's performance. Within two years Mr. Idris had realised the first part of his dream of success by happily marrying Miss Trevena, and his business was yielding him more than 500*l.* a year. He was saving money rapidly, and had interests elsewhere in two businesses, so it is not surprising that after Mr. Charles Umney left Messrs. Herrings & Co., and they asked their old assistant to come back to take his place, he was more than in a position to politely decline. Hard work such as this involves tells in more ways than one, and Mr. Idris in the day of his prosperity was threatened with a breakdown, and a medical friend told him that he had to take a long holiday. So he started to walk to Paris by way of Dieppe and Rouen, chiefly with the object of having a complete change and to see as many old churches as he could on the way. It is curious how a taste for archæology goes along with pharmacy. We do not attempt to explain it, nevertheless it is the fact, that the most notable men in the drug-trade have the taste highly developed, and some are experts. We know one leading member of the Pharmaceutical Society whose holidays follow the cathedral cities of Europe, and this might have been Mr. Idris's fate had it not been for the fact that when in Paris

A New Aërated-water Syphon

caught his eye and riveted him to a commercial enterprise which absorbed all his capital, energies, and time, until other interests than cathedrals gave him pleasure. Before we go further with Mr. Idris and his new syphon, it must be said that this practically overshadows his pharmaceutical career. Besides his shop in Seven Sisters Road he had another in Fortess Road (which is still Williams & Peters), and his interest in them continued until 1893; but 1873 may be regarded as the closing year of his strictly pharmaceutical life, and as he was then making at least 600*l.* a year from the first business alone it may be said that so far he had done what the majority of chemists and druggists wish they could do in a lifetime. The syphon referred to gave a new direction to his energies—in fact, the opportunity that he had been longing for since his Finsbury days of employing his scientific knowledge to the best advantage. Something big was needed for that, and the aërated-water trade had, he considered, a great future in connection with pharmacy. Up to that time the majority of chemists and druggists fought shy of the bottle trade, although many had done very well in it; indeed, the business originated in pharmacy, and some of the leading manufacturers had developed their connection from small beginnings in retail pharmacy. Mr. Idris's idea was that the chemist's business in aërated waters would not be general until it had something which distinguished it from the bottle trade, and the creation of a syphon trade he considered to be the key to the situation. So far the syphons used in England were those introduced by Messrs. Mayo and Warmington in the early forties, and for which they received letters patent in 1843. These consisted of stoneware vessels or jugs such as are represented in the accompanying figures. The second of the figures shows an improvement in the lever, which was described in the Scotch patent obtained in 1844, and this vase stands in an unglazed ware cooler now sixty years old, yet in artistic design it equals any of the present day. We noticed these relics in the Idris board-room while Mr. Idris was answering a telephonic call, and when he returned he helped us to arrange these and several others in chronological order to show the development of the syphon. After the stoneware vases came an ordinary burgundy-bottle designed by Mr. Thomas Mayo. This had a top made of lead hardened with tin, and an exit-tube opened by pressing a metal button. The exit-tube was not continued down the centre of the bottle, so the latter had to be held upside down when emptying. In the second evolutionary stage (represented by the middle figure) we have the modern syphon in embryo, and the third figure shows the syphon in use in England when Mr. Idris visited Paris. What struck him about the Paris syphon was the top: it was made of pure tin. Now, the Mayo syphon soon contaminated the water with lead, and Mr. Idris knew that if he could get chemists and doctors to appreciate the advantages of pure aërated waters, free from lead, which could be drawn off a little at a time, they would be a boon to the public, and a paying thing for chemists. He interviewed the Paris maker, and secured the rights for England on condition that he gave an order for 1,000*l.* worth. We may as well complete this syphon story by saying that the order was given and executed, and Mr. Idris's firm are now the largest manufacturers of syphons in the world. The last figure is a photograph of their "English" syphon, with its beautiful silver-like tin top, which we introduce as a



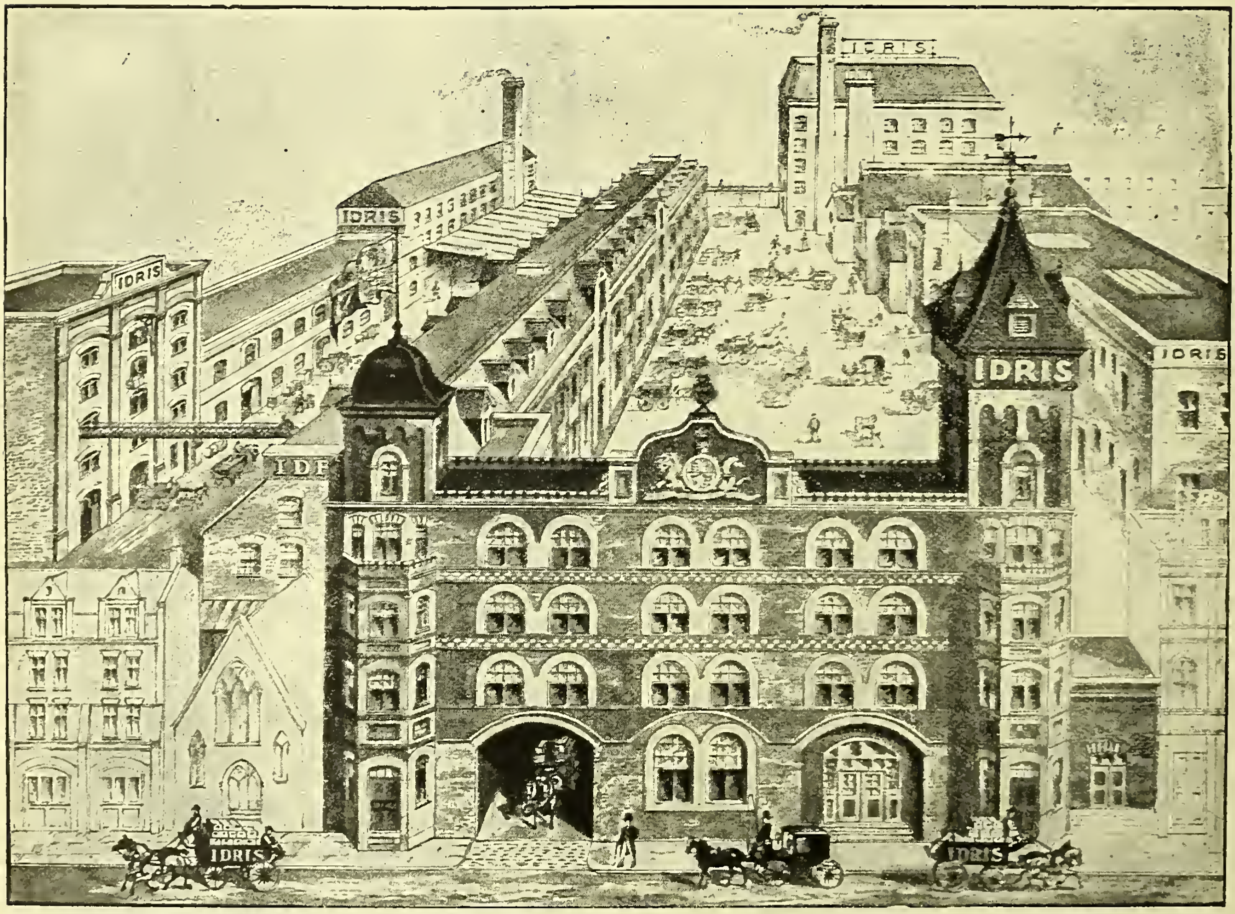
Mayo's Stoneware Syphon Vases.



Evolution of the Glass Syphon.

The Perfect Syphon.

comparison with the Mayo style. By the way, the Mayo business in due course was purchased by Mr. Idris.



The Idris Works, Camden Town.

The New Industry.

It was a little outhouse behind the Seven Sisters Road pharmacy that Mr. Idris made his first aërated-water factory; but that was really an experimental effort, and he did not feel confident of appealing to his *confrères* in pharmacy until he had a comfortable little place in Pine Grove, Tollington Park, where, with a man and a boy as staff, he produced the first waters. He called them "Idris," his idea being that chemist friends Smith and Jones would not care to push the waters made by "Williams, the chemist, along the street." All the work of the venture fell upon himself, and the travelling was not the least pleasant part of it. He had only one way of getting orders, one thing to say—viz., "I'll add 100*l.* a year to your returns, 50*l.* a year to your profits, 100*l.* to the goodwill of your business, and I'll lend you the syphons." This needed a lot of telling, but he kept at it, and—well, why endeavour to explain in detail how the 1,000*l.* of 1873 had increased (including the capital of his partners) to 100,000*l.* in 1893? Such results are the outcome of unflagging energy, resource, and, above all, originality. We cannot leap these twenty years, however, without giving one example from many of the kind of work that Mr. Idris did in the introduction of aërated beverages. Long before "Zoedone" days, and about the time when Dr. Ashburton Thompson awakened the interests of English medical practitioners in hypophosphites, Mr. Idris introduced a delightful beverage called "Phosphade" It had a splendid run—the Prince of Wales, as our King then was, being fond of it. It was followed by another beverage of a digestive rather than tonic character, which he called "Peptade." This contained the digestive ferment, and created such interest amongst medical men that the North London Medical Society had special experiments made with it. Mr. Idris also experimented, for he found an unaccountable lack of digestive power in the beverage after it had been made some time. Again his scientific training served him well, for it enabled him to prove that the carbonated water destroyed the enzymes, and he dropped "Peptade." Soon after medical practitioners began to look askance at medicated beverages; they found, Mr. Idris tells us, that not only did their patients suffer from them, but the beverages made other patients. This belief was really at the bottom of zoedone's collapse.

Assuming our readers accept for granted that Mr. Idris's moves from Pine Grove to Agincourt Works, Hampstead, and from there to Ascham Street, Kentish Town, were indexes to prosperity, we must ask them to travel with us to

Pratt Street, Camden Town,

where in 1893 the present works were opened. At that time the business was converted into a limited company with 100,000*l.* capital (now 306,000*l.*), Mr. Idris having associated with him in the directorate Mr. W. Adpar Jones, Mr. J.

Hughes (since dead), and Mr. E. K. Bishop. The buildings stand on three acres of ground—red brick with stone facings they are—but their size becomes of secondary interest when one knows that they are a monument to Mr. Idris's versatility. He designed them himself, and was his own clerk-of-works. We give a bird's-eye view of them, which is remarkably true to nature, but hesitate to begin any description, there is so much to tell. Standing in front of the building, somewhat to the west, one is struck by their imposing aspect; indeed, Sir Blundell Maple, when he first saw the structure, said, "I'll beat you yet, Idris," and soon after had built near by a mammoth depository which certainly beats the Idris building in size, but comes far behind it in artistic merit. The front of the building is chiefly administrative, but a considerable portion of one floor is devoted to experimental and research laboratories, while the top floor is one of Mr. Idris's residences. At the top of the tower is a water-reservoir which can flood any portion of the works in the event of fire. The middle range of buildings is the aërated-water factory. Glancing along the interior of this, one sees evidence of Mr. Idris's horror of lead. A net of glass pipes is suspended from the ceiling. These convey water, saline solutions, and syrups from the floors above to the filling-machines. Mechanical gangways carry streams of bottle and syphon boxes to the washers and the fillers, and from them to the finishers and the waiting carts. One notices a rigid system throughout which works easily for the diminution of risk and labour. Asepticity is the rule.

In the semi-basement floor we see one of the firm's most valuable assets—a well that yields a magnificent supply of pure water, and a second in course of boring. Here also one notices that Mr. Idris is gifted with the "scrapping" sense which British manufacturers so sadly lack, and which is in a measure the reason for American progress. We found a number of valuable carbonators in disuse, and our query brought out the explanation that the firm had tried every kind of metal carbonator—tin-lined, silver-lined, and glass-lined—and have now adopted oaken barrels. These were used a hundred years ago by Paul of Geneva, the engineer, who just missed being the first to introduce soda-water into England, but who did bring it, and whose business was some time ago acquired by Mr. Idris. There was also in the basement evidence of other new work going on, and this, again, showed exercise of the "scrapping" sense—indeed, evidence of

A Coming Revolution

in the aërated-water industry. It was the first plant, after the experimental stage, for aërating water with carbonic-acid gas at or near the freezing-point. Realise what that means! The water is to be charged with the gas, and filled into the bottles and syphons, just as if it had not a bubble of gas in it. It will be perfectly still. The filling-machines now used, with all their attendant risks to workers, bottles, and syphons, will be abolished. The aërated beverages will be destitute of air, and will contain carbonic-acid gas in such a perfect state of solution that when opened they will give a prolonged sparkle at present unobtainable. Imagine the luscious richness of the gaseous flavour that comes from a sip of iced champagne. This is what the new Idris waters will give.

"Why not," we asked, "dissolve liquefied carbonic-acid gas in the water?"

The question but served to bring out Mr. Idris's intimate knowledge of the subject, and he took us over to the CO_2 house, whose mechanical contrivances have eliminated hand-labour, and gave us an explanation which demonstrated that the pure gas as drawn from the generators provides a beverage which is *sui generis* in crispness and unobtainable otherwise.

We shall not venture to say all that the new process means in money and reorganisation of the Idris factory; we simply mention it is a symptom of the enterprise which has made the business, and as a recent example of the far-seeing wisdom of the founder and his keen appreciation of scientific progress.

Turning again to the picture of the works, we notice on the right departments where syrups, cordials, and alimentary products are made. Right at the back is the syphon and glass engraving factory, and to the left are other departments distinct in themselves. To venture upon figures at this stage were to try to add perfume to the rose, so we

Turn to More Personal Matters

in connection with Mr. Idris's public career. But we ought to speak first of Mrs. Idris, who, as a publicist, is not without honour in North London. She has filled the position of Guardian in St. Pancras and the chair of St. Pancras Liberal Association, showing administrative capacity and gift of speech that bring her much work outside her own home. She is a devoted mother, and is blessed with an affectionate family of sons and daughters, the oldest son, Mr. W. T. W. Idris, being a Minor man, and finding time amidst his work at Pratt Street to devote to law studies at the Middle Temple. His father considers it not a disadvantage in business and public life to have been called to the Bar, and young Mr. Idris is now preparing for his "Final."

Mrs. Idris.

About fifteen years ago Mr. Idris commenced his public career as a member of the Vestry of St. Pancras. He was one of the first elected members of the London County Council, and remained on it until March, 1901, when he was ordered a rest and went to South Africa. Up till then he had represented North St. Pancras, and in August, 1902, was returned for East St. Pancras. His special work on the Council has exercised his chemical knowledge. He was long Chairman of the Water Committee and of the Rivers Committee, and in both capacities initiated scientific research of a valuable character. His thorough knowledge of water was magnificently demonstrated in his evidence before the Royal Commission on the London Water-supply; and another aspect of the water question as it affects London has been brought to view through his advocacy of the reform of the Port of London. In this latter connection he has visited foreign ports, and submitted a wealth of information that led up to the Government inquiry.

As a Liberal politician Mr. Idris in 1892 at three weeks' notice contested the Denbigh Burghs, and almost got in. At the last General Election he had six days' work as a candidate at Chester, and gave his opponent a fright. He is not nursing any constituency at present, but a seat in Parliament will come natural to him, and when it does he will be a marked man, for he has the gift of speech and the art of mastering subjects.

Yet in pharmacy he has been a quiet man. It is only within the last two years that the friends who know him well have dragged him from his retreat in Camden Town. By the way his home is really in Westcliff-on-Sea, and Cader Idris throws her shadow upon a little cottage that stands in grounds that he owns there. The waterfall which is familiar on an Idris showcard is part of his possessions. Next week the assembly of pharmacists at Bristol will have a taste of Mr. Idris's qualities as a man and a chemist, and these notes will help them and others to understand why he is honoured amongst his fellows.

Ethics of Dispensing.

By James Burnet, M.A., M.B., Ch.B., M.R.C.P.E.

No sooner has a dispensing chemist started life for himself than trials and responsibilities make themselves felt. The public expect much, and should the chemist show himself fallible in any respect, no matter how trifling, their confidence is at once shaken. The chemist who truly realises his position and responsibility may not always meet with popular favour; but, what is far more important for him, he will soon gain a reputation for uprightness and honesty which will lead the medical men in the district to send their prescriptions to him—hence, what at first led to popular disfavour will soon produce general esteem and respect.

The object of this note is to point out, from the medical man's standpoint, how the dispensing chemist should act in certain circumstances which are constantly arising in the course of his profession. I have so frequently heard chemists wondering what course they should pursue in such-and-such circumstances that I have often wished that I could give them a short authoritative pamphlet to help them out of their difficulties. Perhaps this paper will in a measure supply the want.

First a word or two on counter-prescribing. I know in some places this is so common that little is thought of it. That it is often enough a harmless custom I am not going to deny, but unfortunately it sometimes leads to distressing consequences. I think the older and more experienced the chemist, the less prescribing is he likely to do. It is often distinctly dangerous. As an example, suppose a woman asks for a powder to check the diarrhœa of her six-months-old infant, and suppose she is given a powder containing pulv. ipecac. co. Well, the diarrhœa may be due to innumerable causes, and sometimes what is called diarrhœa is really the passage of blood and mucus. This may indicate a serious internal condition necessitating urgent operation. The powder soothes the child, valuable time is lost, and no medical man is called in until too late. The child dies eventually, and who is to blame? The parent certainly, but the prescribing chemist none the less. He should have distinctly said it was not his duty to prescribe, and that a doctor must be consulted. This is the only ethical course to pursue on all occasions when asked to prescribe for this or that condition. The chemist must remember it is no part of his duty to treat disease, however simple it may seem.

Apart from its dangers, counter-prescribing entails in the long-run pecuniary loss. When a chemist makes up a mixture on his own responsibility he cannot expect to obtain the same price for it as if it had been dispensed by him from a medical man's prescription. Besides, if the customer finds the powder, mixture, or ointment does no good, his faith in the chemist is apt to be shaken, and very often the result is that the customer calls in a doctor and gets his prescription made up elsewhere. If chemists would look at counter-prescribing in this light, they would soon cease this most pernicious habit. But I may be asked, "Are we not to prescribe for headaches, toothache, and the like?" I answer ethically, "No; you have no right to do so." This, I admit, is a high level of righteousness, but it is one to be aimed at, and one which in the long run will pay.

Now I must consider the handling of a medical man's prescription. Here many worrying questions call for authoritative reply. Suppose, for example, the prescription contains incompatibles or doses well known to be dangerous. In such cases the chemist should tell the customer that the prescription will take some time to dispense, and meanwhile he should communicate with the doctor. On no account should he tell the patient that there is something wrong with the prescription. This would shake the latter's confidence in the doctor, and apart from this the incompatibility or the dosage may be founded on some therapeutic principle unknown to the dispenser.

Next comes the question of substitution. There is certainly a great temptation to substitute one preparation for another when the chemist has not what is ordered in stock. To do so is dishonest, and no right-minded chemist would dream of doing it. Besides, it shows disrespect not only to the prescriber but also to the customer. I am well aware that some medical men are in the habit of ordering preparations of drugs, of which those in the B.P. are quite as active. This habit is growing, and is most hurtful not only to chemists, but also to the medical men themselves. Still, if any particular preparation has been prescribed, it is the dispenser's bounden duty to dispense that one and no other. To this rule there must be no exception.

A mistake that chemists make is to tell the customer to be very careful, or not to take one drop more than what is ordered, or that the medicine is a dangerous one to use. All these remarks are quite uncalled-for, and are apt to make the patient afraid. I well remember ordering atropine for a young lady's eyes. The chemist told her that she must be careful in using the drops, as they were apt to make her blind. Of course she was afraid to make use of them, as she thought there must be some mistake in the prescription.

Sometimes the customer asks, "What is this medicine for?" Of course the object is to find out whether or not the medical attendant is concealing anything about the patient's condition. If the prescription contains digitalis, the dispenser's reply will probably be, "It's for the heart." Now, it may or may not be; and in any case it is ethically wrong, and a piece of gross stupidity on the dispenser's part, to hazard a guess as to what the condition is for which the prescription was written. This leads me to consider the question of giving a copy of any particular prescription to a patient. This should never be done. When asked for, the intention is usually that it may be given to some friend for a supposed similar condition to that in which the particular prescription was used. Nothing is likely to be gained by granting such a request. In such circumstances the only correct thing to do is to tell the customer that he must apply to the doctor who wrote it. Prescriptions should not be made common property. In recording copies of them the chemist should recognise that he has a sacred trust reposed in him, and should see to it that he does not in any way violate that trust.

Sometimes a patient gets the same prescription repeated time after time. In such a case the chemist ought to inquire whether or not the doctor is ordering it still. Very often he has long ceased his attendance, and the patient may be going on taking what is really doing him harm unknown to his medical adviser. This is especially true of digitalis and morphia mixtures and the like. In such cases the dispenser would do well to communicate privately with the doctor before allowing himself to be led into repeating such prescriptions on his own responsibility. An equally dangerous practice is the selling of laudanum, chloral, bromide of potassium, and similar dangerous drugs without prescription. True, if one man refuses to do so, his next-door neighbour may be only too willing to oblige, but it is morally wrong. Many people are habitual laudanum or chloral users simply because they find dispensing chemists are obliging enough to give them what they ask for without remark.

Some Dispensing-problems.

The prescriptions which have been sent to us by subscribers during the past month have proved to be of exceptional interest when put on trial at the dispensing-counter, and we bring the results together in one article. Those who have sent the prescriptions will recognise their own.

Salol	gr. v.
Thymol	gr. j.
Betanaphthol	gr. ij.

Make a cachet.

Salol and thymol liquefy. When this has taken place, add enough flour to form the liquid into a stiff paste or damp powder, when it is brought into a condition suitable for cachet.

Zinc. oxid.	ʒj.
Bismuth. oxychlor.	ʒss.
Plumbi carb.	ʒss.
Liq. calcis et vaselin. aa	℥ss.

By substituting olive oil for vaseline we get a very useful lotion. That, indeed, may have been what the prescriber intended when he wrote "vaseline," with which it is impossible to produce anything usable.

Pulv. capsici	gr. ½
Pulv. ipecac.	gr. 1/6
Acid. carbol.	gr. ¾
Ext. bellad.	gr. 1/6
Ext. nuc. vom.	gr. ⅛
Ext. cascaræ sag.	gr. ⅔

Ft. pil.

For one dozen pills add 8 gr. of phosphate of lime and wheaten flour to mass.

Liq. ferri perchlor.	♏x.
Sodii salicylatis	gr. v.
Acid. citric.	gr. x.
Liq. am. cit.	♏xx.
Glycerin.	♏x.
Aq. ad	℥ss.

Reported to have been dispensed clear. This can only take place, we find, when the citric acid is left out.

Ol. morrhuæ	℥j.
Paraffin. liquid.	℥j.
Spt. chlorof.	ʒij.
Aq. ad	℥viij.

Ft. emul.

Place ℥j. pulv. gum. acac. and ʒj. pulv. tragac. co. in a mortar, add the liquids (aq. ℥ij.), excepting the spirit, and emulsify; then gradually add the remaining water, and the spirit last.

Ung. sulphuris	ʒj.
Ung. hydrarg. ammon.	ʒj.
Ung. plumbi iodi	ʒj.

To be smeared on the face at night and rubbed off in the morning.

This considerably blistered the skin of the patient, but not that of the dispenser who made it. It may be considered a powerful ointment, and any patient having a slight tendency to acne would probably be easily affected by it. The fact that it affects one person more than another is due to the different degree of sensitiveness of the skin.

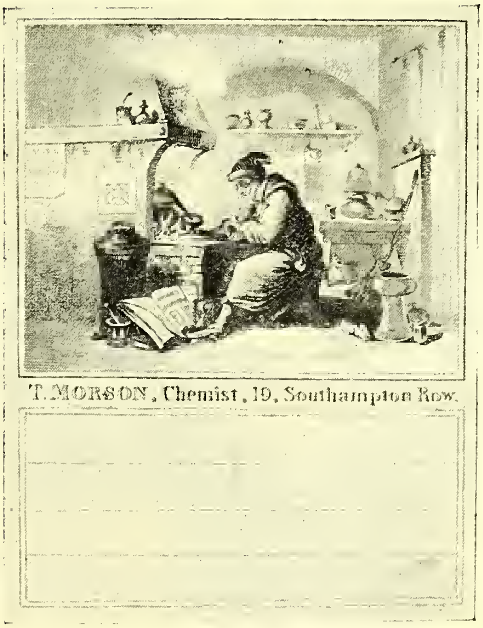
Looking at the prescription from its chemistry point of view, it will be recognised as an interesting case of interchange in which iodide of lead and ammoniated mercury give rise to iodide of mercury, which is in some cases a distinct vesicant. That this actually takes place can be demonstrated in the most convincing and beautiful manner by mixing on a white slab lead iodide and ammoniated mercury, and adding a drop or so of water; the yellow colour quickly changes to the red of mercuric iodide. When, however, the two salts are mixed with any fatty substance the mixture retains its original colour for many hours; ultimately red specks will begin to appear, hence it will be noted that the age of the ointment affects its action.

Light, too, is an important factor. Many iodide and mercury compounds are quickly changed by the influence of the solar rays, whereas when kept in the dark no apparent change takes place. A good example of this is a powder of iodoform and calomel, which, exposed to light, becomes changed from the characteristic yellow to red; it is therefore important to instruct the patient not to expose such a powder to light, or its application may cause pain. It is even stated that when an open wound is dusted with iodoform, and mercury is given internally, mercuric iodide will form in the wound and cause discomfort.

In this connection may be recalled a series of experiments recently made with ung. potass. iodid. to which 1 in 3,000 of mercuric iodide was added. The potassium carbonate of the official ointment was omitted, in order that the mercuric iodide might not be decomposed, as it was feared. Within a few minutes of the application of the ointment to the skin intense irritation was set up, and on removing the dressing it was found that the cotton wool showed the characteristic iodine blue. When the ointment was spread on lint, paper, or any other cellulose material, and warmed, a brown stain was immediately formed. This did not happen when the ointment was warmed on glass or porcelain, and the ointment caused little irritation when applied on oiled silk.

A series of experiments were made with various ointment-bases, including vaseline, wool-fat, plain lard, and benzoated lard, and the general result was that without potassium carbonate combinations of potassium iodide and mercuric iodide quickly liberated iodine at the body-temperature. The results generally confirmed previous experience as regards ung. potass. iodid.—viz., that without free alkali it gradually darkens in colour—but no satisfactory explanation was found for the greater rapidity with which the ointment shows this decomposition when so small a quantity of mercuric iodide as 1 in 3,000 is added to it.

AN OLD DISPENSING-LABEL.


T. MORSON, Chemist, 19, Southampton Row.

The above engraving of a dispensing-label is one of the most artistic we have ever seen. It was designed for Mr. Thos. N. R. Morson, who was President of the Pharmaceutical Society of Great Britain in 1848-9, but was not, we understand, much used, if ever. The picture part of it was, however, used for some time in the wholesale side of the business as a trade-mark. The original is an old oil-painting still in the possession of Messrs. T. Morson & Son; but the engraver has altered several details, such as the figure of the alchemist. In the original this is a young man.

Ancient and Bell-metal Mortars.

IN the first of the following articles Mr. Daniel Davison, pharmaceutical chemist, Cromer, supplements his article contributed to our Winter Number with particulars of further fresh finds; and in the second Mr. T. Pitt, F.C.S. (Messrs. Burgoyne, Burbidges & Co.), describes a few mortars which he has found in Chertsey.

I.

At the conclusion of my article in THE CHEMIST AND DRUGGIST, January 31, 1903, I requested correspondence with those of your readers who happened to possess old mortars of interest. This request was not made with the intent to become a purchaser, although one is glad of the opportunity of securing specimens which their owners wish to dispose of, but was made so as to enable me to tabulate such information and gain fuller details of the various styles of mortars still extant, and thus by comparison ascertaining approximate date of mortars possessing characteristic decoration, but not themselves dated. I have received many very interesting replies, but unfortunately none was accompanied by photographs, so it is not easy to make them descriptively interesting to others. My surmise that there were many mortars hidden away in obscurity has been quite borne out. Interest in the subject being aroused has stimulated to search, and finds of mortars in a similar way to my own have resulted.

The first reply I received was most interesting to myself; it was sent me from Totnes (quite the old-world town one would expect to witness of antiquity), and gave me particulars of a large mortar with decoration exactly like that of my largest one (fig. 2 in first article), but having in addition the initials W.C. and date 1661. I had considered my mortar was cast in the eighteenth century, as it somewhat resembled in shape and decoration one belonging to a fellow-collector dated 1719, but the exact similarity with the Totnes mortar warrants me in estimating the date as about fifty years earlier—*i.e.*, from 1660 to 1670. These mortars were probably cast at the celebrated foundry at Whitechapel, and possibly the letters W.C. may allude to the foundry, although it was more customary to give initials of maker or person for whom made. The information I received, together with my own experience, justifies the assumption that practically all the antique bell-metal mortars now existing in England were made subsequent to the fifteenth century. Here and there a mortar of an earlier date, such as that of York, may be met with, but such specimens are extremely rare. Those made in the sixteenth century are also rare. I have heard of very few. Most of the dated specimens were made between 1620 and 1670; few that I know of are dated outside these fifty years.

After the seventeenth century grinding-machinery had begun to take the place of mortars, and iron and marble had replaced bell-metal in the manufacture of mortars of a large type, whilst the mortars actually made of bell-metal or bronze were, in England at all events, more plainly made, and present little if any attraction to the collector, as they are neither decorated nor dated. Some large mortars are to be found dated in the eighteenth century, but I have not come across any small mortar of this period dated.

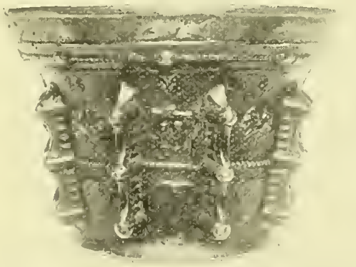


FIG. 1.—SPANISH OR FLEMISH.

I hesitate to send descriptive particulars of mortars belonging to fellow-collectors who have been good enough to correspond with me on the subject; it would be like killing another man's game. I have, however, added some very fine specimens to my own collection, and a description of those may be interesting. Fig. 1 is probably of Spanish or Flemish origin, and is the most lavishly decorated mortar I know. It is somewhat larger than is usual in this class of mortar, weighing 8 lbs., measuring 6 inches in diameter and 4½ inches in height. It has nine curious projecting wings of a decorative nature. Between the pairs of projections are two embossed emblematical medallions: those below are all of the Sacred Heart, those above of framed saint-like figures and shield-like bosses alternating. The frames surrounding the figures are all different, and of curious device. A cabled line of ornament separates the medallions, and also runs round the mortar below the rim, a circular stud-like ornament being over each medallion. Below this chain-like decoration is a hard line and pendant from this; over each ornament is a trefoil, almost cross-like, with a long stem. This mortar was described to me as early fifteenth century, but I think it must be later than that—probably early sixteenth. It conveys the impression of antiquity, and would appear to have belonged to an ecclesiastical body. The rim presents the appearance of having had an inscription effaced.

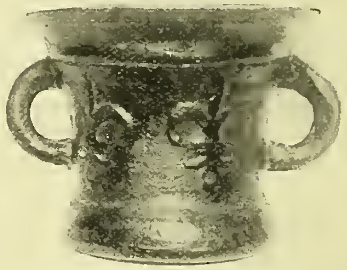


FIG. 2.—EARLY ENGLISH.

Fig. 2 is an excellent Early English example of fleur-de-lys decoration. It is somewhat roughly cast, but the decoration is bold and clear. It is 6 inches in diameter, 4¾ inches high, and weighs 6½ lbs. I should consider it dates from early in the sixteenth century.

Fig. 3 illustrates another English mortar. It is very massive; although only 5 inches high and 6½ inches in diameter, it weighs 14 lbs. It has a beautifully smooth antique polished bronze surface, and the following inscription in quaint lettering below the rim:

FRANCIS COTTREL. 1614

Each letter is on a square lozenge-shaped casting, and the words and date are separated by a fleur-de-lys, also on a similar casting. There is no ornamentation or decoration beyond name and date. It would be extremely interesting if any reader, by means of family history or registers, could trace the owner of this mortar, and I should be most pleased to correspond with anyone with antiquarian tastes who could do this. I note in a register of pharmaceutical chemists the name "Samuel Cotterill," and amongst chemists and druggists "John Cottrill." The spelling of these names differs from the name on my mortar, but in nearly three hundred years' lapse of time such variation might well occur. It might be of interest to these gentlemen to hark back a few hundred years with the possibility of tracing an ancestor.

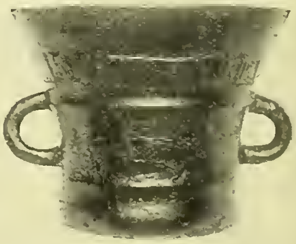
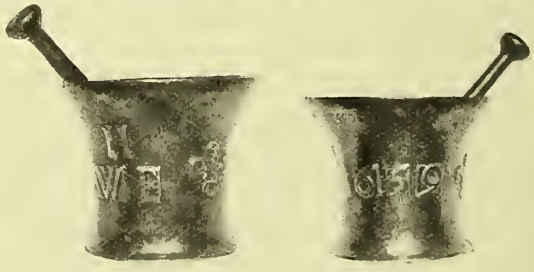


FIG. 3.—ENGLISH.



A B

FIG. 4.

Figs. 4 A and B illustrate a finely-cast mortar of good

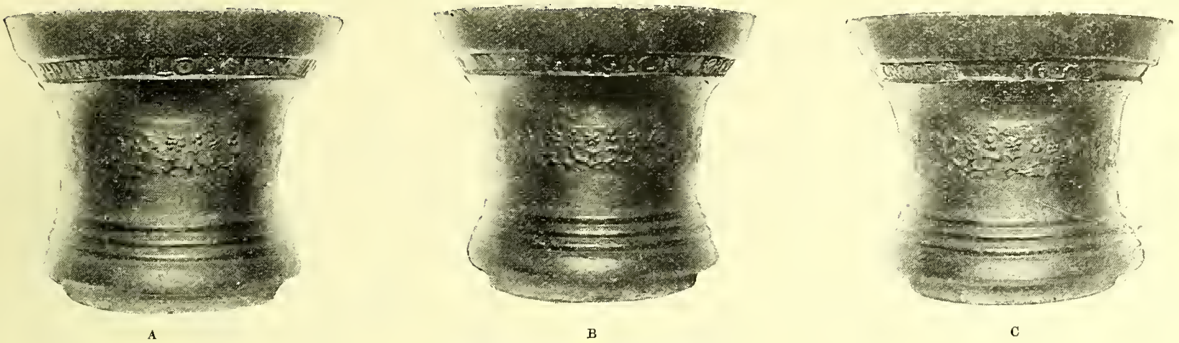

A B C

FIG. 5.—AN ABINGTON MORTAR.

shape and beautiful finish. The date and initials are clearly shown, and the decoration is worthy of notice, being that of the Prince of Wales's feathers, which occurs twice on the mortar. I know of no similar decoration on mortars. There is no mistaking the device, as the plumes are well defined, likewise the brooch or badge. The mortar is $4\frac{3}{4}$ inches high, $5\frac{1}{2}$ inches in diameter, and weighs 7 lbs.

Figs. 5 A, B, C represent a most interesting mortar. It is the second largest I possess, and, curious to say, is made by the same founder as the largest one before illustrated, the decorations being a perfect facsimile of the other. As it is dated, it confirms my previous remarks as to the approximate date of the large mortar. This is certainly one of the finest and most perfect mortars I know of. It weighs 80 lbs., is 12 inches in diameter and 10 inches high, and is in perfect preservation. A beautifully cast inscription runs below the rim as follows:

Phillip Lockton, in Abington, Grocer, 1653.

This imperishable evidence of a man's pride in his business is interesting. It is fairly safe to assume that Phillip Lockton was a grocer-druggist, one of those men who in later years supplanted the apothecary in the pharmaceutical business. The inscription on this mortar is so explicit and defined that it should be possible to find other details of the life of Phillip Lockton in Abington, grocer, of the year 1653, and I would request correspondence with residents in that good town.

This completes the recent additions to my collection. I hope to add still further. These memorials of craftsmen of a past age are full of interest. The vast strides pharmacy has taken in recent years puts back the use of these primitive implements into remoteness.

D. D.

II.

A perusal of Mr. Davison's interesting account of the mediæval mortars in his possession led to the suggestion that some account of four other mortars would be acceptable to readers of THE CHEMIST AND DRUGGIST. They possess some points of similarity to Mr. Davison's specimens, as illustrated in the *C. & D.*, January 31, 1903, and one of them is by the same maker, whose name is recorded upon both mortars. Three of the present specimens are dated; the fourth and most interesting from an artistic, though not from an antiquarian, point of view, is undated.

The oldest of the four is a mortar of good proportion (fig. 1), and its handles are interesting as being unlike those of specimens described either by Mr. Davison or by Miss Florence Peacock, although it may happen that the Saffron Walden specimen described by the lady may nearly resemble it in this respect. The only markings are:

Anno dm MCCCCCXXIIII.

The words are separated by conventional figures of a bird and an animal. The mortar measures $5\frac{3}{4}$ inches across the top and is 5 inches high; its weight is 8 lbs. $5\frac{1}{2}$ oz.

Next in order of date is the subject of fig. 2, which might, but for the fact that it is dated, be considered earlier in style. Beneath the rim is the inscription:

PETER VANDEN GHEIN MEFECIT MCCCCCXXXII.

It has no handles, and no ornament except two bands in relief on the waist. The measurement across the top is $5\frac{1}{4}$ inches, height 4 inches, and weight 5 lbs. 1 oz. It is forty-nine years older than Mr. Davison's mortar by the same maker, or perhaps one should say from the same foundry, and it will be seen that the lapse of years has brought improvement, for Mr. Davison's specimen has "Van den" for "Vanden," "me fecit" instead of "mefecit," and "Ghein" in place of "Ghien."

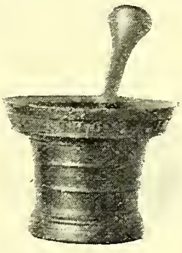


FIG. 1.

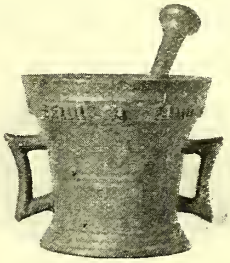


FIG. 2.

Fig. 3 is a large and beautiful mortar, undated and uninscribed, except with lovely conventional ornament in relief at the base. The handles are very similar to those of the Dutch mortar of Mr. Davison, and, as far as can be judged the ornamentation is similar in character. I have placed this third in order of date, for, although Mr. Davison's example is dated 1627, I consider this to be much earlier than fig. 4. The mortar is $7\frac{1}{4}$ inches high, 8 inches across the top, and it weighs 20 lbs. 3 oz.

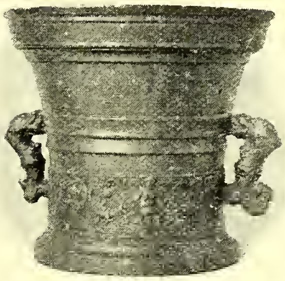


FIG. 3.

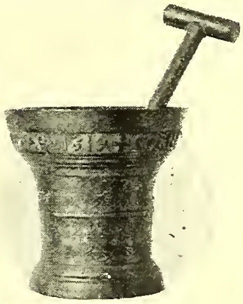


FIG. 4.

Fig. 4 is, like its companions, a Dutch mortar, its ornamentation is debased in character and not executed in relief. It bears the inscription:

CORNILIS · VRIESEN · LISKEN · S.H.F. · A° · 1619 ✠

It has no handles, measures $5\frac{1}{2}$ inches across the top, is $5\frac{5}{8}$ inches high, and weighs 7 lbs. 1 oz.

Mrs. Newhook, of Cowley Cottage, Chertsey, who has kindly lent me the specimens, has expressed her willingness to show them to any chemist who is interested in ancient mortars.

T. P.

Adulterated Peppermint Oil.

By Ernest J. Parry, B.Sc., F.I.C., and C. T. Bennett, Ph.C.

WITHIN the past few weeks we have had the opportunity of examining many samples of peppermint oil which were not soluble in 70-per-cent. alcohol. From some of these we have isolated a fraction of high boiling-point, which contained a body having a sp. gr. within the limits of peppermint oil, but with a strongly positive optical rotation and a high refractive index. From these physical characters and from its chemical reactions it is obvious that this body is a substance belonging to the sesquiterpene series which is not normally present in pure peppermint oil. It strongly resembles dextro-cadinene, which has been detected in small quantities by Power and Kleber in normal peppermint oils, but the proportion in which it exists in these oils is sufficiently large to show that it has been added for sophisticating-purposes. The general characters of these adulterated oils were in close agreement, falling within the following limits:

Sp. gr. at 15° C.	0·909 to 0·912
Optical rotation	−3° to +3° 30′
Refractive index	1·4760 to 1·4820
Esters as menthyl acetate	5·8 per cent. (average)
Total menthol	34·0 per cent. (average)

When shaken with 70-per-cent. alcohol, oily drops separated and sank. The oils were soluble in absolute alcohol, and in 90-per-cent. alcohol with opalescence. A preliminary examination of a typical sample gave the following results:

FRACTIONATION UNDER ATMOSPHERIC PRESSURE.

Below 200° C.	nil.
„ 210°	12 per cent.
„ 220°	35 „
„ 230°	50 „
„ 240°	60 „
„ 250°	71 „
„ 260°	83 „
Above 260°	17 „

FRACTIONATION UNDER REDUCED PRESSURE (20 mm.)

Characters of Fractions Collected in 10-per-cent. Portions.

No.	Sp. Gr.	Rotation	Ref. Index
1	0·892	Nil	1·4672
2	0·899	− 3°	1·4657
3	0·905	− 8°	1·4666
4	0·908	−10°	1·4668
5	0·910	−13°	1·4687
6	0·910	−13°	1·4712
7	0·911	−12°	1·4748
8	0·914	− 2°	1·4820
9	0·918	+25°	1·4989
Residue	0·930	+45°	1·5095

The following table shows the optical rotation and refractive index of various fractions of other samples.

ADULTERATED OILS.

I. *Distilled under Reduced Pressure.*

Fraction	Opt. Rotation	Ref. Index
10 per cent.	−11° 30′	1·4680
10 „	−10°	1·4690
10 „	−10° 30′	1·4690
10 „	− 7° 30′	1·4725
10 „	− 4°	1·4810
10 „	− 1° 30′	1·4830
10 „	+ 4°	1·4910
10 „	+14°	1·4950
15 „	+27°	1·5010
5 „ residue	—	—

II. *Distilled under Reduced Pressure.*

Fraction	Opt. Rotation	Ref. Index
25 per cent.	−13°	1·4692
25 „	−14°	1·4703
25 „	+ 0° 30′	1·4806
20 „	+25°	1·5009
5 „ residue	—	—

III. *Distilled under Atmospheric Pressure.*

Fraction	Opt. Rotation	Ref. Index
25 per cent.	−12° 30′	1·4678
25 „	−18° 30′	1·4711
25 „	− 2° 30′	1·4794
20 „	+37°	1·4999
5 „ residue	—	—

IV. *Distilled under Reduced Pressure.*

	Sp. Gr.	Rotation	Ref. Index
First 80 per cent.	0·907	− 6°	1·4730
Next 10 „	0·919	+28°	1·5008
Last 10 „	0·923	+46°	1·5071

V. *Distilled under Reduced Pressure.*

	Sp. Gr.	Rotation	Ref. Index
First 70 per cent.	0·905	−12°	1·4668
Next 10 „	0·913	+ 1° 30′	1·4827
„ 10 „	0·915	+20°	1·5024
Last 10 „	0·919	+42°	1·5076

A comparison of these figures with the distillation-results of a normal Wayne County peppermint oil at once reveals gross adulteration. A sample of genuine oil was distilled, and the results are tabulated for the purpose of comparison:

GENUINE OIL.

Fraction	Opt. Rotation	Ref. Index
10 per cent.	−11° 30′	1·4648
10 „	−11°	1·4648
10 „	−15° 20′	1·4645
10 „	−19°	1·4652
10 „	−21°	1·4634
10 „	−22°	1·4648
10 „	−24°	1·4660
10 „	−27° 30′	1·4680
10 „	−36°	1·4674
10 „ residue	—	1·4768

Three of the samples were bulked, as large quantities were not readily available, and the fraction of high boiling-point and high dextrorotation was separated. This was twice rectified over sodium, which then ceased to have any appreciable action on the oil. The oil thus obtained had the following characters:

Sp. gr.	0·925
Rotation	+ 32°
Refractive index	1·5014
Boiling-point	258°–268°

From two of the other samples, of which a large quantity was obtained, we got the following results:

Sp. gr.	0·921	0·923
Rotation	+ 42°	+ 46°
Refractive index	1·5048	1·5071
Boiling-point	260°–265° C.	260°–268° C.

Characters of the Adulterant.—Not soluble in water or in 90-per-cent. alcohol, but soluble in absolute alcohol, chloroform, and ether. Not readily attacked by H_2SO_4 nor by alcoholic potash. Absorbs bromine with avidity, giving a bluish-violet colouration, which becomes green on heating. Oxidised by potassium permanganate in acid solution, but scarcely acted upon by sodium. Treated with a mixture of nitric and sulphuric acids develops a reddish-violet colour. Bromine in acetic acid gives a purple colour.

These characters indicate the presence of an oil containing a sesquiterpene. Attempts were made to prepare a crystalline compound with a stream of dry hydrochloric-acid gas, but the result was a reddish-brown resinous mass which showed no tendency to crystallise. The chief oils containing sesquiterpenes are those of cedar, cade, juniper, gurjun, and copaiba. Of these the only normal dextrorotatory oil is the African variety of copaiba which was first examined by Mr. J. C. Umney (*P.J.* 3rd series, vol. xxii., page 452, and vol. xxiv., page 215), and the characters of the oil detailed by him show that it contains a dextrorotatory sesquiterpene from which no crystalline derivative could be obtained. In order to confirm the inference that this oil had been used for adulteration, samples of African copaiba were examined, and fractions separated having very similar characters to the adulterant above described. About 100 grams of the balsam was distilled under reduced pressure and the oil collected in four equal fractions. The figures obtained were:

	Sp. Gr.	Rotation	Ref. Index
1 ...	0·917	+17° 30′	1·5030
2 ...	0·918	+28° 30′	1·5043
3 ...	0·921	+46°	1·5061
4 ...	0·927	+55°	1·5082

Other samples of African copaiba oil had the following characters:

Sp. gr.	0·919 – 0·932
Rotation	+30° – +37°
Refractive index	1·4999 – 1·5040

Two of these on fractionation showed variation of optical rotation and refractive index as under:

	I.		II.	
	Rotation	Ref. Ind.	Rotation	Ref. Ind.
25 per cent. ...	+16°	1·4960	+24°	1·4975
25 „ ...	+19°	1·4965	+26°	1·4980
25 „ ...	+24°	1·4980	+29°	1·4981
20 „ ...	+48°	1·5089	+43°	1·5090
5 „ residue	—	—	—	—

Although no crystalline derivatives have been prepared, we are of opinion that the above experiments justify the conclusion that the adulterant used for these samples of peppermint oil is the oil distilled from African copaiba, and it is probable, from figures obtained by us during the past few months, that this adulteration has been going on for some time, though hitherto undetected. We trust, therefore, that this exposure will have the effect of putting an end to the addition of such foreign substances to this oil.

Spanish Olive Oil.

AN interesting report on the position of Spanish olive oil has been written by Mr. D. R. Birch, the United States Consul at Malaga. It is written principally for the benefit of the American importer, and appears to bear the impress of truth, which is difficult to arrive at when dealing with such a product as olive oil. At the time of writing (February 3) the olive-oil season at Malaga was at its height, and three-fourths of the immense crop of last year had been sold. There has been a larger demand for Spanish olive oil this season than for years past, which the Consul attributes to the partial failure of the Italian crops and the desire of Italian exporters to meet the demands of their foreign trade by supplying the Spanish product. A small yield of olives usually follows a large one, but a comparison with the unprecedented production of 1901 in the provinces of Cordoba, Jaen, Seville, and Malaga, which resulted in the pressing of 3,500,000 arrobas (14,920,500 gals.) of oil last year, shows that the crop of 1902, from which the present oil is now being pressed, is not much less, being estimated at 3,000,000 arrobas (12,789,000 gals.). Prices at the time of writing had differed but little from those of a corresponding date last year; shipments were made in January, 1902, at 30*l.* to 31*l.* per ton of 1,058 kilos., c. and f.; while this year from 30*l.* 10*s.* to 31*l.* 15*s.* has been paid for the same quality of oil. Local exporters are seeking to create the impression that the sales to the United States this year are considerably under those of the 1902 season, but the American Consular invoices show quite a contrary condition. From October 1, 1901, to February 1, 1902, 1,605 petroleum barrels of olive oil were exported from Malaga to the United States; while from October 1, 1902, to February 1, 1903, invoices have been taken out for 9,240 barrels, or more than five times as much as last season. The oil this season is not considered to be quite so good as that of last year, showing more acidity. At present the Malaga olive-oil exporters have an abundant supply in their cellars, but complain that the sales throughout Europe are not as great as at the same time last year. Usually the sales to Russia (where large quantities are used) and to other parts of Europe are made during April; and, while a definite forecast of the fluctuation in prices cannot now be made, the Consul believes that prices will advance later in the season, when the European demand sets in.

Phaseolunatin.

THIS is the name of another glucoside which Dunstan and Henry have added to the list of cyanogenetic alkaloids. They described it in a paper communicated from the Imperial Institute laboratories, and read to the Royal Society on June 18. *Phaseolus lunatus* is an annual plant probably indigenous to South America, but now generally cultivated throughout the tropics for the sake of its nearly white edible bean, often known as the "Lima" or "Duffin" bean. In Mauritius the plant is grown under partial cultivation for use as a green manure, and produces under these conditions beans which differ from those obtained under thorough cultivation in exhibiting dark-brown or purple seed-coats and in being more or less poisonous. The poisonous properties of these beans have been shown by M. Boname to be due to the production of hydrocyanic acid, which is formed when the crushed beans are moistened with water. Subsequently Van Romburgh verified this observation, and showed that acetone is simultaneously formed. Dunstan and Henry have isolated the glucoside phaseolunatin, which crystallises in colourless needles, is readily soluble in water, and is lævorotatory in solution. On hydrolysis it splits up as follows:

$$\underset{\text{Phaseolunatin.}}{C_{10}H_{17}O_6N} + H_2O = \underset{\text{Dextrose.}}{C_6H_{12}O_6} + \underset{\text{Acetone.}}{(CH_3)_2CO} + \underset{\text{Hydrocyanic acid.}}{HCN}$$

When warmed with alkalies phaseolunatin hydrolyses into phaseolunatinic acid, and this acid, by the further action of dilute acids, is decomposed into dextrose and α-hydroxy*iso*butyric acid. It follows that phaseolunatin is the dextrose ether of acetonecyanhydrin—viz., $(CH_3)_2C(CN)—O—C_6H_{11}O_5$. It is, therefore, the first member of a new class of natural cyanogenetic glucosides, since it contains an aliphatic nucleus. Amygdalin, dhurrin, and lotusin, the other known cyanogenetic glucosides, are aromatic compounds. The enzyme present in the seeds of *Phaseolus lunatus* has been examined, and shown to be identical in its properties and in the effects it produces with the emulsin of almonds.

Specimens of the so-called "Rangoon" or "Paigya" beans derived from *Phaseolus lunatus*, grown in India and imported into this country for the manufacture of cattle-food, have also been examined and shown to contain a small quantity of phaseolunatin. The amount of hydrocyanic acid producible from the seeds of *Phaseolus lunatus* has been found to vary from 0·041 per cent. in the case of light-brown beans to 0·088 per cent. in the case of dark-brown or purple beans. The specimens of "Rangoon" beans examined furnished, on an average, about 0·004 per cent. of this acid.

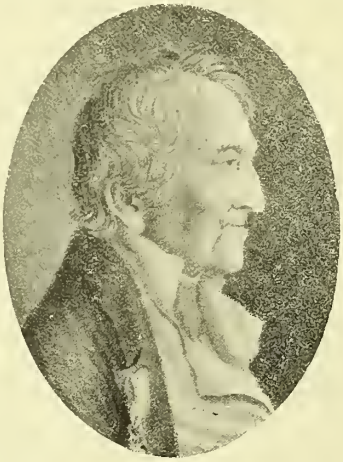
The authors draw attention to the fact that, under cultivation, this plant furnishes light-coloured or white beans, which are incapable of producing prussic acid, and contain no phaseolunatin, although the enzyme emulsin is still present. In this respect the seeds of *Phaseolus lunatus* resemble those produced by the two varieties of almond (*Prunus amygdalus*). The bitter almond contains both the cyanogenetic glucoside, amygdalin and the enzyme emulsin, whilst the sweet almond contains emulsin only.

NAYTHER.—"How did the doctor tell you to take the medicine, Larry—internally or externally?" "Nayther wan, sor." "But it must have been one or the other." "Divil a bit, sor. Nayther wan." "But look here, Larry; that's absurd. It must have been one or the other, you know." "Nayther wan, I tell ye. He tould me to shnuff it up me nose."

An Historic Danish Pharmacy.

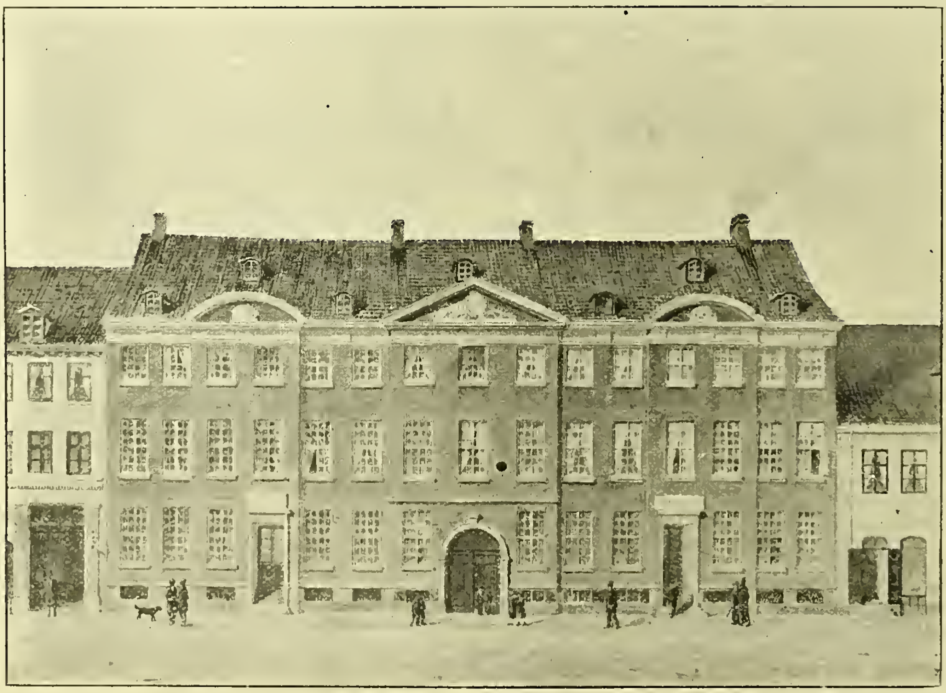
The Royal Military and Vajsenhus Pharmacy, Copenhagen, is one of the most interesting places in Denmark, the land of ideal conditions for the Pharmacist. In this article Mr. Gustav Möller tells of its curious foundation and collateral developments to modern times.

THE charitable institution which, under the name "Vajsenhuset," was erected in the year 1720, under the Government of Frederick III., was built in the German style. One hundred years before there was an institution of similar character called "The Children's Home," but the views on children's education which existed at that time savoured more of rigour and punishment than education, and the institution fast became a sort of penitentiary. During the fearful plague of 1711, however, all control was taken from the authority of this home. A Royal order of 1713 commanded that there should be erected a children's institution at the door of which there should be placed a basket large enough so that a clothed child might be laid therein, and beside the basket there should be a bell, by which a signal



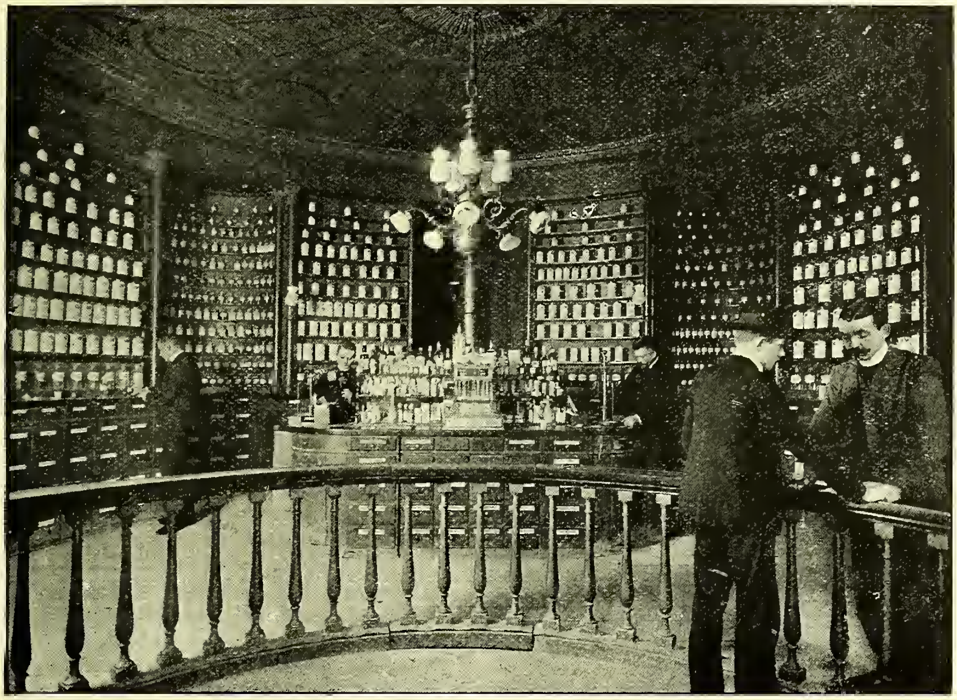
F. H. Müller.

T. P. Groth.



The Royal Vajsenhus.
The book-shop is in the left part of the building and the pharmacy in the right.

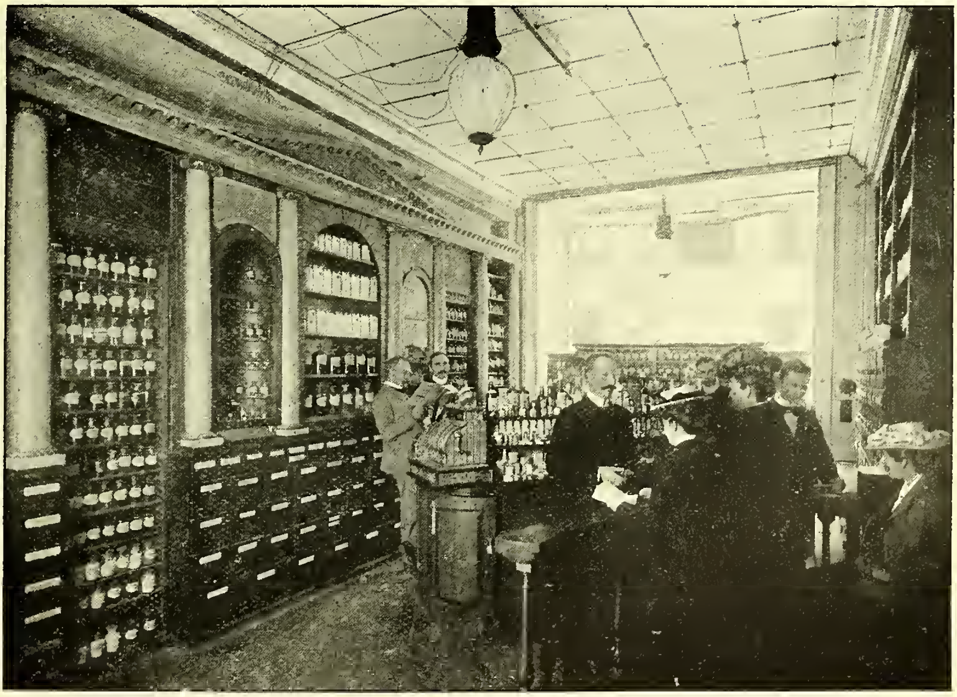
could be given so soon as the child was laid in the basket. The child was then to be adopted and educated in the institution. The first "Vajsenhus" in Copenhagen was opened in Ny Torv in March, 1721.



Interior of the Vajsenhus Pharmacy (1826–1901).

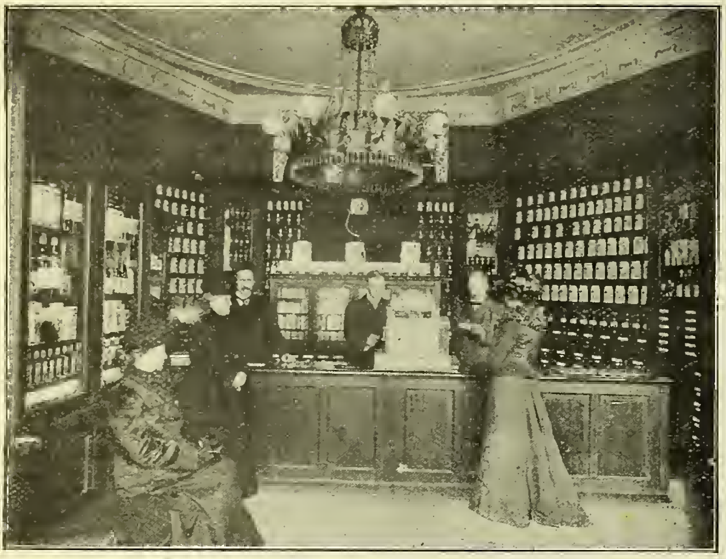
Owing to the East Indian Mission Frederick III. came into constant contact with the famous philanthropist, N. H. Francke, of Halle, in Germany. Francke's institution, called "Waiser"—*i.e.*, orphan-asylum — was copied as regards style. The buildings of the institution comprised a pharmacy, a book-shop, and also a printing-establishment, and from the proceeds of those shops, along with voluntary contributions of money, Francke supported his institution.

The pharmacy in connection with the Vajsenhus was first opened on April 23, 1734, under the direction of Günther, a pharmacist from the institution in Halle. Günther was certainly a very clever man, and thoroughly understood how to attract the ordinary people as well as medical men to the pharmacy, and in so doing he was able to assure a considerable profit, which went towards the support of the institution. But he made himself most unpopular with the other chemists in the town. Günther at first went to Copenhagen at the solicitation of the directors of the institution, from whom he received a certain salary, but his success was so great, that before long he was able to assure them a certain income, and all money over and above this income he kept to himself in place of salary. He was tenant of the pharmacy from 1742 to 1752, but unfortunately the directors allowed him in 1746 to lease another pharmacy in the neighbourhood, the consequence of which was, that when the tenancy of the pharmacy belonging to the Vajsenhus was put up to auction in the year 1752, Günther was found to be the lowest bidder, and so lost it. The change of tenant was most unfortunate for the Vajsenhus, as not only was the successor to Günther (by name J. Buus) too unsettled, but Günther, being in competition with him, very soon withdrew to himself most of the customers.



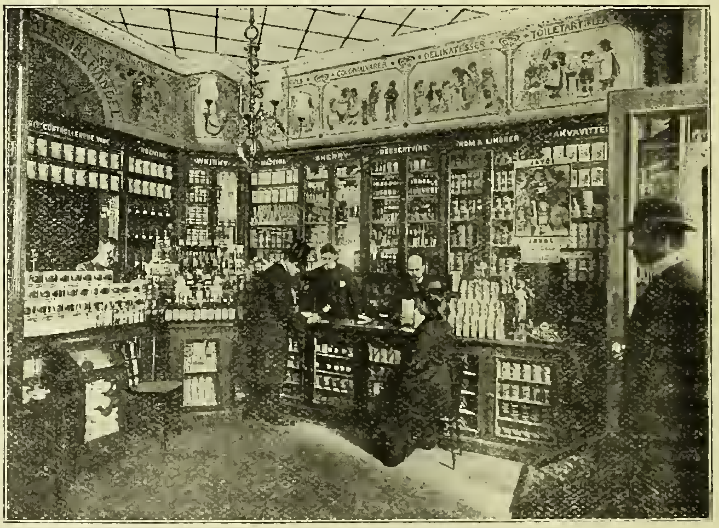
The Temporary Pharmacy (1901–1902).

Under Buus the pharmacy not only lost its prestige, but fell so far that he had to retire from the business, being unable to pay the sum agreed on. There was no luck for the pharmacy until F. H. Müller, in 1773, became the tenant, Müller being a practical chemist had to enter for the Pharmaceutical examinations, which he passed most successfully. During his tenancy the pharmacy had a most fortunate time. He was also the founder and first director of the Royal Danish China-works.



The Professional Part of the New Vajsenhus Pharmacy.

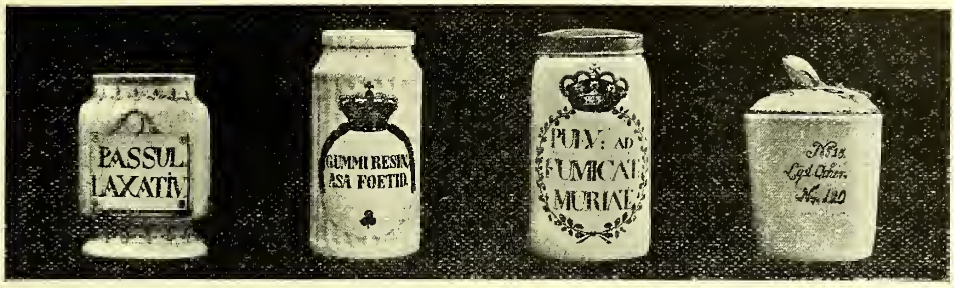
In 1795 a disastrous fire destroyed the Vajsenhus, along with a great part of the city. The directors' intention was to rebuild the institution on the same site but they could not come to terms with the Government. They, however, arranged with the Government that they would get the pharmacy privileges in whatever place they eventually built. In 1800 the directors sold the old site to the magistracy for the erection of a new Courthouse. Adjoining this was built the "Glamme Torvs Pharmacy," the tenancy of which was in the hands of the directors of the Vajsenhus, but when the directors built a new institution on Kóbmagergade, in which there was a book-shop and a pharmacy, they lost the tenancy of Glamme Torvs Pharmacy, which went into other hands.



Perfumery and Toilet Department of the New Vajsenhus Pharmacy.

The engraving on p. 156 shows the Vajsenhus with the pharmacy and the book-shop in the one building. The tenant of the pharmacy was a young pharmacist, by name Groth, who had gained a thorough knowledge of the medical requirements for soldiers and sailors during the Napoleonic wars, having been employed in the army and navy as a chemist. At that time medical men in the army and navy got a certain salary, for which they had to provide the necessary requirements for the soldiers and sailors. It was only during war-time that a field-pharmacy was provided at the expense of the Government. Groth petitioned the King to allow him to provide the medical necessities of the army and navy. The petition was granted, and thereafter the pharmacy was called "The Royal Military and Vajsenhus Pharmacy." Groth was paid a fixed sum by the Government in order to enlarge the pharmacy, but at the same time he had to agree to the following conditions—viz., that the pharmacy was to be open at all times for inspection by any naval and military medical officer, also that a military Pharmacopœia should be compiled, and that drugs, including medicines dispensed, should be charged 20 per cent. off the retail prices.

In 1836 Groth, with the permission of the directors, removed the pharmacy, which he found too small and otherwise unsuitable, to a building bought by himself on Kóbmagergade. One of the pictures shows the interior of the pharmacy as it was from that date until 1901. It was a typical Danish pharmacy, having high shelves all round, china jars, and a railing (desk) across the shop, over which customers' wants were supplied by the assistants, there being no showcases of any kind to attract the attention of customers—in fact, so plain and unassuming was the pharmacy that many people believed it was not a shop at all, but a place of magic where insects and other animals were transformed into medicines. This always impressed them with a certain amount of awe. The dispensing department was in an adjoining room. At this time the Vajsenhus Pharmacy was quite the leading one in Copenhagen. One of Groth's successors was a chemist named Spreckelsen, who, in 1877, bought the pharmacy privilege from the directors of the Vajsenhus for 135,000kr., and in 1878 the privilege and building were sold to two chemists—Lassen and Engberg—for 660,000kr. As, however, Messrs. Lassen and Engberg were not successful in keeping up the former prestige of the pharmacy, owing to it becoming old fashioned, they, in 1902, sold it to Messrs. Meyer and Trojel for 545,000kr. The new owners intended to rebuild the establishment, and took temporary premises at No. 42 Kóbmagergade. One view shows the temporary pharmacy. Messrs. Meyer and Trojel, in the meantime, went to England and Germany to



Jars from the Royal and Military Vajsenhus Pharmacy.

get ideas, their object being to make their new establishment as up to date as possible.

When the new pharmacy was opened it was found that articles were exposed for sale in the windows. This attracted great attention, because such a thing had never been done in Denmark before. Pictures show the exterior of the pharmacy and the interior during shop-hours. At the back of the showcases to the left is the dispensing department, where about three hundred prescriptions are made up daily. In the front shop one will observe the fine china jars from the Royal Danish China-works, and the above shows one of those, together with three jars from the old Vajsenhus Pharmacy. To meet the wants of customers for toilet-articles and similar things, and to oppose the idea that a pharmacy is not a shop and to be quite up to date, Messrs. Meyer and Trojel have attached to the pharmacy a grocery-shop, where customers can get all the perfumes, soaps, toilet-articles, and similar things they want. The entrance to the grocery department is on the right side of the pharmacy. A picture shows this shop with its original paintings above the wallcases. A large and well-equipped compounding laboratory has also been added by the present owners, where extracts, tinctures, and syrups are prepared in large quantities by trained and experienced chemists. There is also a modern analytical laboratory, where chemical and bacteriological analyses are made under the supervision of a medical man. There are also in connection with the pharmacy fine warehouses, where crude drugs and chemicals are stored in large quantities under the most favourable conditions. The business in its various departments gives employment to six pharmacists and about twenty unexamined men and women.

Pharmaceutical Institute, Copenhagen,

The Vajsenhus Pharmacy of To-day.

Dental Notes.

Cleaning Glass Cement-slabs.

Every practitioner knows how difficult it is to remove the cement which adheres to a glass cement-slab. Usually a knife is resorted to, with the result that the slab presents a scratched appearance. Dilute nitric acid will remove all cement particles, no matter how hard, and the slab, after being rinsed in water and dried, will have a clean, smooth surface.—*Dental Cosmos.*

Useful Analgesics.

Mr. J. Morgan Howe, New York, in the *International Dental Journal*, reports favourably on the use of wine of opium in relieving pain in pulpless teeth that continue to ache after local conditions have been made favourable and other applications have failed. Applied in the root-canal it often soothes the irritated periapical tissues. Menthophenol, made by melting together 3 parts of menthol crystals with 1 part phenol crystals, is another preparation which the author considers valuable in treating the conditions above mentioned. It has marked antiseptic properties, but is not a disinfectant to the degree required in the treatment of putrescent conditions.

French Pharmaceutical Poets.

THE poet-pharmacist is no mere product of modern civilisation. The ancient and subtle connection between poetry and pharmacy is alluded to in the "Newcastle Apothecary," where the anonymous author asks—

> And why should this be counted odd?
> Can't men have tastes who cure the phthisic?
> Of Poetry the Patron God,
> Apollo patronises Physic.

M. Julliard, the venerable bard of Parisian pharmacy, commenced his poetical address at the banquet which closed the 1900 International Pharmaceutical Congress, by expressing the same idea—

> The divine Æsculapius being Apollo's son,
> Our entrance to the Vale of Muses we have won.

The classical connection doubtless explains why some of the earliest attempts at what is nowadays termed a Codex or Pharmacopœia were in verse. M. Cap, a French pharmacist-poet, says that in the time of the Cæsars the prescriptions for popular remedies used in Rome were rhymed to facilitate committal to memory, and likewise to render any change or error in the text more easily perceptible, A false quantity in a Latin hexameter might thus draw the dispenser's attention to a false quantity or quality in the medicament. M. Cap's suggestion is at least flattering in the supposition that the "compounders" of ancient Rome were men of culture on whose delicate ears a false rhythm would at once jar and arouse attention. Be this as it may, Nicander (about 150 B.C.) described in verse the virtues of the famous electuary "theriaca"; while a couple of centuries later Andromachus, "archiator" or head physician to the Emperor Nero, treated the same subject in a Greek poem of 11,000 lines. This poem, by the way, was translated into French in 1660 by the famous French pharmacist Moses Charas.

Emilius Macer, of Verona (a friend of Ovid's), Rufus, Philon of Tarsus, Heliodorus of Athens, John of Milan, kept up the traditions of versified descriptions of healing plants in the Latin world.

Our Gallic neighbours have had their "Rois de France" and their "Rois de Français," they have also had their "pharmacist poets" and their "poets of pharmacy." It is rather with the former than with the latter that we have to deal. Yet we must just mention Gilles de Corbeil, doctor to King Philip Augustus, who published all his medical works in Latin hexameters. His MS. on "Signa et causæ febrium" is still preserved in the Bodleian library, but more interesting to pharmacists is his poem of 6,000 lines "De virtutibus et laudibus compositorum medicamentum," in which the effects of ointments, balms, and antidotes used at this epoch are described in well-turned verse.

THE FIRST FRENCH PHARMACIST

who rhymed his "art and mystery" was Master Thibault Lespleigney, apothecary at Tours, who published in 1538 a "Promptuary of Simple Medicines in Joyous Rhyme, with their Virtues and Qualities." This contains a description, in alphabetical order, of the animal, vegetable, and mineral substances employed in medicine, their origin, nature, and uses. Then Paul Coutant, who was an apothecary of the historic town of Poitiers, published, during the reign of Henry IV. of France, two poems, "The Poetic Garden" and "The Second Eden"; while Ellain, Professor of Pharmacy at the Paris Faculty of Medicine, who died in 1621, left some ninety sonnets on various subjects.

Moses Charas, to whom we have already alluded, is one of the best-known of the ancient French apothecaries. As the author of a Pharmacopœia, an exile for conscience sake after the revocation of the Edict of Nantes, a professor of chemistry at the King's Garden, and a member of the Academy of Sciences, he is familiar to most, but his poetical abilities are perhaps less generally known. Yet curious rhymed prefaces and epilogues may be found in his works; for instance, his "Treatise on Vipers" is concluded by "Echiosophium," a poem of 518 lines on the same subject.

In 1623, Pierre Maginet, apothecary at Salins, published the "French Theriaca," a volume of ninety octavo pages on this favourite theme, but he also largely translated from Andromachus. De la Grive, an apothecary of Lyons, likewise translated Andromachus's poem, dedicating his work to the king.

But lest the reader should imagine that the French pharmaceutical muse of the seventeenth century was hypnotised by Theriaca and the Viper (as Eve was fascinated by the Serpent), we hasten to quote a few apothecary bards who soared to the higher regions of Parnassus. These were Aimé Piron, who lived at Dijon from 1640 to 1727; Bavolet, another apothecary of the same period (whose muse was scathingly criticised by Piron); Albin Gauthier, an apothecary of Avranches, whose "Union of Love and Chastity" was published at Poitiers in 1606; and Pierre Portefaix, who fled to Switzerland to avoid religious persecution, and whiled away the hours of exile by writing psalms, hymns, and spiritual songs.

THE PRE-REVOLUTIONARY PERIOD

of French history, with its Jean Jacques-Rousseau vein of sentimentality, was propitious to the production of poetry. Demachy, the well-known pharmacist of the hospital at St.-Denis (and later on chief of the Central Hospital Pharmacy of Paris), wrote many trifles in verse. Cadet de Gassicourt produced "The Poet and the Savant: A Dialogue on the Necessity for Literary Men Studying the Theory of Science," besides three or four vaudevilles. By the way, Cadet's poetical aspirations laid him open to some stinging epigrams. The *Literary Review* of the Year VII. (1801) announced that "Cadet de Gassicourt, having given up poetry for pharmacy, uses his works to wrap up opium pills; the remedy thus acts twice as quickly."

Christophe Opoix, of Provins, was a member of the National Convention which tried Louis XVI. The merciful pharmacist voted against the death-sentence passed on the unfortunate monarch. But his poetic "Project for a Fête in honour of the Convention and the Regeneration of France" proves that he was thoroughly imbued with the patriotically sentimental spirit of this curious epoch. He also wrote several theatrical pieces: one is entitled "The Mineral Waters of Provins." He died in 1840.

THE NAPOLEONIC ERA

was possibly less poetic. Yet young Fée, an army pharmacist, who commenced his career by serving in the Peninsula, found leisure to write a five-act tragedy on Pelayo (the Spanish national hero who answers to the British "Caractacus" and the French "Vercingetorix"). Later in life Fée varied his botanical and historical works by occasional studies of poetry, such as "The Popular Songs of Corsica" (1850), "On the Spanish Drama," while, in his "Flora of Theocritus and the Greek Bucolics" (1833) he combines his two hobbies—botany and literature. He was President of the French Botanical Society and professor at Strasbourg when the disaster of 1871 put an end to French rule in Alsace. He was offered a professorship at Geneva, but refused to leave France, and died at Paris in 1874. To an Englishman Fée's most interesting poetical work is his translation of Gray's "Elegy" written in a country churchyard. It is, perhaps, inferior to that of André Chénier in literal exactitude, yet it is a creditable and interesting effort which can, perhaps, only be adequately appreciated by those who have attempted the task of translating faultless Anglo-Saxon into readable French verse.

From 1830 to 1848 Napoleonism was the fashion. Thus we find Misset, a pharmacist of Rethel (Ardennes) at this epoch, writing such poems as "Napoleonic Religion," "To an Eagle," "Napoleon: his Death and Resurrection," "A Napoleonic Night"—all breathing the most fervent admiration of the great warrior.

"Toute la lyre" was likewise the motto of Eugène Dubail (1806–1878), in whose works patriotism, liberty, and melancholy occasionally gave place to the merriest of songs.

Philippe Benoit, a pharmacist of Lyons, wrote a tragedy—"Virginia"—which was produced at a theatre in that city in 1825; he also published a lengthy poem on the "Progress of the Human Mind."

Barthes, of Montpellier, was a prolific poet; he is said to have written 18,000 lines, but the whole of his works, being in "patois," are rather "caviare' to the general reader of French.

Claude Bernard

was a poet as well as a pharmacist in his younger days. When he was 21, and came to Paris, he presented a tragedy in verse—"Louis VI."—to a well-known literary man, who, before even glancing at the MS., urged his young friend to abandon his projects of dramatic authorship and "stick to pure science." Bernard followed his advice. What became of his MS. is unknown. Another mystery is that which surrounds Felix Martin's work "The Physiology of Alimentary Substances." This Parisian pharmacist (born at Issoudun in 1806) varied his description of foodstuffs by charming verses. His preface hints that his work is not all original, however, and we are left in doubt as to his full poetic merit.

Jean Baptiste Yves, a pharmacist at Herisson and a native of Montluçon, wrote an "Ode to the Republic," a "National Chant," some songs, and "Faust: A Medley in Verse and Dialogue," 1861; and

Mayet, a Paris pharmacist, wrote a few poems in his youth, of which the "Orphan" is the most remarkable.

Guyton de Norveaux, the chemist (1737–1816) wrote a comic poem directed against the Carmelite nuns of Dijon (his native town); while Dr. F. N. Gallois (1831–1890), who was also a pharmacist, published in 1873 a poem entitled "The Doctor," which is as striking in its way as Luke Fildes's picture bearing the same name. He describes with painful reality the child suffering from croup, the doctor's arrival, and the opening of the trachea (this is before the days of serum). It is really a remarkable piece of descriptive verse.

Of Recent Years

the production of verse, often of high quality, by well-known men in the pharmaceutical world of Paris, has been a curious and noteworthy characteristic of a prosaic age. M. Cap, so well known as a contributor to French pharmaceutical history, was a charming song-writer, and some of his verses, set to music by A. Franchomme, Chardon, &c., gained real and well-merited popularity. The prettiest is, perhaps, "Fair Banks of the Var and Durance." M. Genevoix, a former President of the Paris Society of Pharmacy, is stated to have written a rhymed "History of Pharmacy," which has unfortunately disappeared, with the exception of a fragment printed in a journal of pharmacy, as having been read at the 1864 banquet of the Paris Pharmacists' Provident Society. One or two other efforts of M. Genevoix's muse may be unearthed by the diligent student of French pharmaceutical journals of the same epoch.

Few names are better known in Parisian pharmacy than that of M. Louis Mialhe (1807–1886). He was a clever versifier, as well as a pharmacien de 1re classe. His most successful effort (published in 1830) was the charming song "Brook, why lingerest thou?"

In the dark days which followed the war of 1870-71 M. François T. Lebrou, ex-President of the Parisian Pharmacists' Syndicate, lamented the loss of Alsace-Lorraine in pathetic yet hopeful verse. "Might makes Right," "France, Remember!" and "Hope" were the titles of his three effusions. The Congress of French Pharmaceutical Societies, held at Marseilles in 1868, revealed another pharmacist-poet in the person of M. Paret, who addressed all present in verse full of nautical allusions, as one might expect from a seaport rhymer. The Chairman was their "careful pilot," and his colleagues the "crew" of the bark of "Pharmacy."

M. Alfred Leconte, an ex-pharmacist of Issoudun, who recently represented that district in the French Chamber of Deputies, was a member of the famous "Singers' Cave" ("Lice Chansonnière du Caveau"), and many of his songs had their hour of success in the café-concerts of Paris. He occasionally contributed versified trifles at pharmaceutical gatherings, such as his "Spectre of La Fontaine at the Pharmacists' Congress" and his "Chaffing Letter (Epître Badine) on Pharmacy." This last is a very curious parallel of mythology and pharmacy, the Olympian gods being defined as chemical bodies. Saturn is lead, of course. Jupiter is identified as benzoin ("Bezoard Jovial" may be found in some ancient dispensatories). Neptune figures as "aqua pura"; Apollo, the sun god, is identified with gold, and Mars with iron.

Il est médecine aux fillettes
Quand l'age les rend palettes.

Venus figures as salts of copper, "pale Diana" as silver, while Ceres is specified as $C_{12}H_9O_9HO(k)$. M. Leconte also wrote "The Mysteries of Flora," a long poem in which Tournefort, Candolle, Ray, and botanists and botany in general are treated.

Present-day Pharmacy Poets.

are not numerous. M. Crinon, Secretary of the International Pharmacy Congress of 1900, wrote some patriotic verses in his younger days (1870-71). M. Nicot de Villemain, proprietor of "Pelletier's Pharmacy" in the rue Jacob, Paris, has dedicated a well-turned sonnet to the memory of Pelletier and Caventou, which was printed in the *C. & D.* some time ago. M. Edouard Pavèse, pharmacist at Chambèry, published a little book of "Legendes Fleuries" in 1899, illustrated by himself. Even more recently M. Antoine Chansroux, pharmacist at Beaucaire, addressed a sonnet entitled "Cri de Cœur" to M. Berthelot on the occasion of the great chemist's election to the Academie Française.

Sous la coupole glorieuse
Où la France voit ses enfants,
Sous l'or des lauriers triomphants
La Science trône—orgueilleuse!

(Proudly Science is enthroned
Underneath the glorious dome,
Where France sees her noblest sons
Laurel-crowned in triumph's home.)

But the typical pharmacist bard of modern Paris was M. Julliard. Few, indeed, were the important gatherings of Parisian pharmacists where the veteran (he boasted his half-century behind the carboys) but ever juvenile poet did not offer his tribute of verse. His effusions on pharmaceutical subjects were numerous. They appear, however, never to have been collected or printed, and it is to be feared that few have been preserved. M. Julliard did not disdain, in his after-dinner recitations, an occasional pinch of "sel gaulois," or a joke on the more intimate features of his art, and his sympathetic character and professional reputation gave a singular interest to his harmless hobby.

M. Louis-Alexis Julliard.

We may conclude by an allusion to the younger generation of the song-birds of pharmacy, who are often to be discovered in the Poets' Corner of the *Pharmacie Laborieuse*, the journal of the Chemists' Assistants' Association of Paris. Among these the place of honour must be given to M. Leon Reynaud, whose "Apprentices' Grumble" and "A Hundred Pills" have been noticed in our French News columns. His fertile muse ranges from grave to gay, always tuneful and often happy in expression. His frequent choice of subjects connected with pharmacy gives a peculiar interest to his little poems. In the same column M. Baraty sings, as poets will, of springtime, beauty, &c., and occasionally a rhymed tournament takes place between the two poets. It is as an epistle addressed to his fellow-poet that M. Reynaud sighs the sigh of the chemist's assistant and breathes his modern aspirations. The following (with apologies to the author) is a free translation of his style:—

I'd like to be a little bird
  When shines the sun:
I'd sing, and fly from bough to bough,
  Till day is done.
Instead of that, the Fates confine
  Me day by day
In dungeon where the bright sunshine
  Can't find its way.

Pharmaceutical Veterans.

George Edward Burt.

ONCE of Westminster, then of Stratford-le-Bow, last of Lordship Lane, East Dulwich, now living in comfortable retirement at Feltham.

This, in brief, is the business-career of Mr. G. E. Burt, an octogenarian, who since THE CHEMIST AND DRUGGIST first appeared in 1859 has been reading it regularly, and has frequently contributed to its pages. We have disturbed his retirement to get from him some of his recollections, and these are so interesting that we give them in his own words:

MR. G. E. BURT.

My father was apprenticed as an apothecary to Dr. Roberts, of Bridport (originator of Poor-man's Friend, the recipe for which I have now), but when going the clinical rounds in Bartholomew's he was seized with his first epileptic fit. Others followed, so his life-work was stopped. Often when he had a "warning" have I weighed for him 30 to 40 gr. of calomel as one dose, and, if taken soon enough, it stayed them for months or even years. In the town where we lived was a commercial and a Latin school. He wished me to go there. The headmaster refused unless for a fee of 50*l.* a year. Several gentlemen took up the case, entered a suit at law, which ended in the trustees being ordered to adhere strictly to the regulations of the trust-deed, and they were condemned in costs. Before the suit was finished an opening for me was found in the shop of a Mr. Charles Mullett, chemist, of Ilminster, Somerset, who did a very fair country business. He was not a well-educated man, but a good pharmacist, and he taught me how to make galenicals from sacchar. ust. up to cold-cream and the tinctures. He lent me books, among others a very old copy of "Gray," I think, in which I saw the first attempt at a chemical classification, of which I only remember the following arrangement: "Things burnable and things not burnable," the first class being again divided into "Things burnable oily, and things burnable not oily." After a while he lent me Thomas's "Practice of Physic" and Thompson's "Dispensatory." How I did pore over them!

One afternoon a gentleman came into the shop and engaged the governor in a long conversation. I listened, and found they were talking of a new society the gentleman was interested in, which he wished my master to join and give him one or two guineas per annum. When he was gone I sidled up sheepishly and asked the master "Should I join?" His reply was, "No; they won't do any good in my time, and not much in yours." The gentleman was Jacob Bell.

At that time doctors and chemists were on more friendly terms than they are now, and I was frequently lent to old Dr. Mules, of Ilminster, and his son (I think C. H. Mules, who died four or six years since) to dispense and attend to poor patients, &c. One time, when the senior was away, the assistant was taken ill of what was called "typhus," and died rather suddenly. I had a longer spell than usual of being on loan (nearly a fortnight), and happened to enter the surgery while the old doctor was catechising his son as to what he had done for the patients during his absence. Especially do I remember the son telling the father he had given the assistant effervescent draughts and 10 gr. of calomel every two hours. "Ten grains!" shouted the old gentleman, "you ought to have shoved it in by the teaspoonful!" And yet I have lived to see 4 gr. of hyd. c. cretâ spoken of in the *Lancet* as a large dose.

From Ilminster, when my seven years were over, I passed on to Hereford. Here, again, we made most of the ordinary galenicals up to horse-powders, and here, for the first time, I saw wilful adulteration. No matter; the governor became Mayor of Hereford, and died respected and rich. He was fairly good to me. Here I had Faraday's "Chemical Manipulation" to read, and when he thought my presence was, perhaps, a hindrance to the advancement of the apprentice, he frankly told me so; "but," said he, "I will try to get you a berth to go to when you leave." He did; and by means, I think, of Evans & Lescher's representative, procured me one with R. Hulbert, at Basingstoke. There it was pure-drug trading; no paints, oils, or galenicals, but large —very large—quantities of acid. sulph. (a car-load at a time), cupri sulph. (by the ton), and arsenic (by the hundredweight, used as wheat-dressings). Here I asked for a week's holiday, specifying the first week in August. Mr. Hulbert, imagining that a fair lady would be at the seaside at the end of August, readily gave me a week in the beginning; but when the end of July drew near he heard she would go early, and, as he fancied he could clinch a momentous proposition if he could meet her, he refused me leave to go. I at once gave him notice of quitting his employ at the end of August. Alas for him! She did not go until September. So Cupid was defeated.

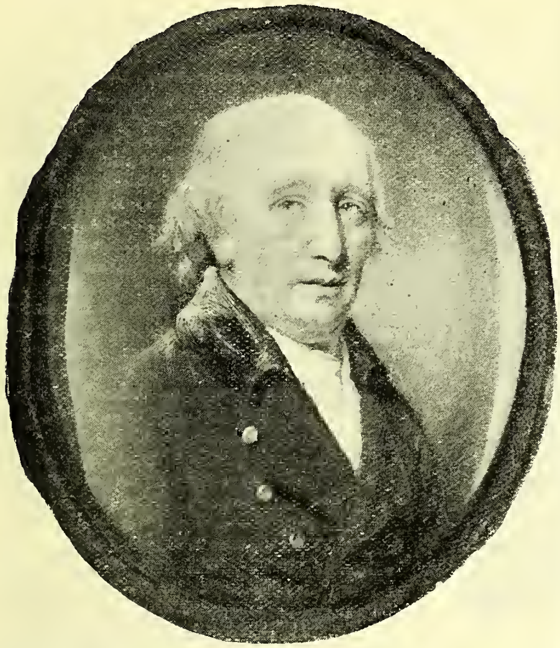
My next situation was at Woolwich, with Mr. and Dr. F. Bossey. I got it in this way. A surgeon at Basingstoke came to me in July. "Do you want a situation, Mr. Burt? If so, I think I can get you one." I declined his good office on account of the agreement above mentioned; but when that was broken I went to him. The berth was still open. "I can get it for you if I think you are capable," he said. "Do you know this?"—handing me a volume of "Galen." "No, sir," I replied. "I know a little about medicine, and there is something wrong here." "What is that?" "Why, two 'r's' in that word." "Oh, you will do." And I did do. I had ten days' holiday to go home. Here I spent four happy years. Married thence; and when I left I was driven to the station in the masters' carriage, and repeatedly visited them during forty years.

I next undertook to manage a business at Woburn, Beds, especially the drug-department. It was a very mixed business—drugs one side; butter, cheese, bacon, pickles fronting the door; tea, coffee, sugar, spice on the next side; and coffin-furniture in a corner. The flour, salt, and hops, in the yard, were left to the porter. Four monthly journeys, one every Monday taken by the governor, busy packing his orders Tuesday and Wednesday, sending them out on Thursday, sawing butter-tubs, chopping lump sugar (by hand), cutting bacon-sides on Friday constituted the daily toil. After leaving here, I had a short spell away from the counter, and then went to Westminster.

Mr. Burt is a man of parts. He was forty before he began to learn French and German, and did so then because he wished to give his children a thorough coaching in the languages. This opened to him the literature of these languages, and up to the present he has kept in touch with German pharmaceutical literature. His six children have done him honour. One son is rector of a Church of England congregation in New Brunswick; another is a medical practitioner; and a daughter has recently been elected a member of the College of Preceptors. Others in Canada have also distinguished themselves, and a grandson is in Jesus College, Oxford, having won a scholarship at Christ's Hospital (Bluecoat School).

THE Chinese authorities are looking to the opium-shops in China to contribute their share of the extra revenue required for the payment of the contribution to the foreign indemnities, and the consequence has been that the retail price of the drug has risen about 10 per cent., and adulteration is more rife than ever. In alluding to the above fact our Consul at Nanking states that the imports into that port during 1902 amounted to 983 cwt., mostly Patna and Benares opium.

FRANCIS NEWBERY, THE YOUNGER.



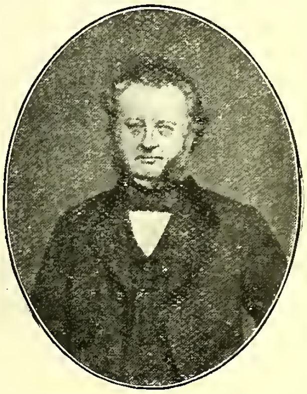
This is a hitherto unpublished portrait of Francis Newbery, son of John Newbery and grandfather of Mr. Arthur Le Blanc Newbery and Mr. Lionel Newbery, the present heads of the firm of Francis Newbery & Sons, patent-medicine dealers and druggists' sundriesmen, Charterhouse Square, London, E.C. The portrait is from a miniature which, through the death of his sister, has recently come into the possession of Mr. A. L. Newbery. There is an earlier portrait of Francis Newbery, by Romney, of which an engraving is given in Welsh's "Bookseller of the Last Century." The present portrait shows the subject in blue coat and brass buttons, which was "the thing" at the end of the eighteenth century and well into the nineteenth. Francis must have been a handsome man. Romney's portrait shows him in the wig which was the fashion when the early Georges were on the throne; here we have him in the silvered hair of old age.

There was another Francis Newbery, a nephew of John Newbery, the friend of Dr. James and of Oliver Goldsmith. "The Younger" was generally used in speaking of John Newbery's own son Francis, who was born at Reading on July 6, 1743 (old style). At private schools in Ramsgate and Hoddesdon he received the groundwork of his education, and in 1758 entered Merchant Taylors' School, Dr. James, the fever-powder inventor, having advised his father to send him there. He lived in St. Paul's Churchyard the while. From Merchant Taylors' in 1762 he went to Trinity College, Oxford. Medicine as well as the classics received his attention while there; indeed, Oxford scarcely afforded him all that he required of the subjects connected with physic (then vastly important in his father's bookselling business), for in the winters of his third and fourth years at Oxford he was a pupil of Dr. John Hunter, the celebrated anatomist. By the beginning of 1766 he resolved to go to Cambridge, so that he might get his medical degree more expeditiously, and entered as a commoner of Sydney Sussex College. In 1767 his father died before he had proceeded to his degree, leaving him the whole of his medicine business and a fourth of the bookselling one. He appealed to his friends Dr. Samuel Johnson and Dr. James as to what he should do, and they advised him to give up the idea of practising medicine, but to sell stamped medicines. He therefore came to London, and in May, 1770, married Mary Raikes. Success in business and distinction in public life (he was Sheriff of London in 1795) attended him, and he died on July 17, 1818. Francis Newbery was a remarkably accomplished musician and a poet.

Easton's Syrup.

The Man who Devised it.

Some time ago we mentioned the fact, then little known, that Mr. John McMillan, of Glasgow, had, when an assistant, helped Professor Easton to perfect the syrup of three phosphates with which his name is associated. We have since availed ourselves of Mr. McMillan's good offices in order to obtain a portrait and some particulars respecting the professor, for at the time he died chemists and druggists did not appreciate how much they were indebted to him pecuniarly, and nothing, so far as we are aware, has been recorded of him pharmaceutically. The portrait which we give of Professor Easton is reproduced from a *carte-de-visite* which Mr. McMillan has obtained from an old patient of the professor's. It shows a face not unlike that of Dr. John Brown ("Rab and his friends"), especially in kindly expression. From Mr. McMillan we learn that Dr. John A. Easton was born in India in 1807. his father having been a member of the Indian Medical Service. While still a boy he was sent home to be educated in this country, and in due time entered as a student at the University of Glasgow. At the age of twenty-one he obtained the licence of the Faculty of Physicians and Surgeons, Glasgow, being his first qualification to practise. He entered on general practice in Glasgow, obtaining the appointment of district surgeon in the city, where he laboured among the poor. He slowly worked his way into a good practice, and in 1836 was admitted M.D. of the University; and, four years later he was elected a Fellow of the Faculty, on his appointment as professor of materia medica in Anderson's College, then known as "Anderson's University." He held this appointment till 1855, when he was advanced to fill the chair on the same subject in the University. Materia medica is not a subject which might be supposed to lend itself readily to flights of eloquence, but if ever there was an eloquent exponent of this branch of medicine it was John Easton. Some of his periods were delivered with an *ore rotundo* which to the more fastidious taste of the present generation might appear too ornate and rhetorical. But it was these passages that lingered in the memories of many of his students. Those of them who survive have mostly entered on the stage when the "almond-tree flourishes"; but at least one of them, now high in office in Glasgow, can still recite with gusto one or two of the more ornate periods. There is no doubt that as a teacher he was a great favourite. He was equally so as a physician, and many of his old patients cherished his memory with affection. He owed it to his early appointment as medical officer to the police force and the Central Police Office that his opinion was often sought in medico-legal cases; and a number of his contributions to periodical medical literature have reference to cases in which he gave evidence in the Law Courts. He was appointed physician to the Glasgow Royal Infirmary in 1852, and some of his lectures on clinical medicine were published, these showing his devotion to the practical side of therapeutics. One contribution to this subject was drawn from him by a paper of Professor (now Sir William) Gairdner, with whom he broke a lance on the "Action of Expectorant-remedies." In 1865 his health began to fail; he was disabled by a stroke of paralysis, and died on December 12 of that year, at the age of fifty-eight. Mr. Alexander Duncan, LL.D., of the Faculty of Physicians and Surgeons, Glasgow, is one of the few living who knew Professor Easton well, and Mr. McMillan has been helped by him in getting these facts together. We desire to acknowledge his assistance.



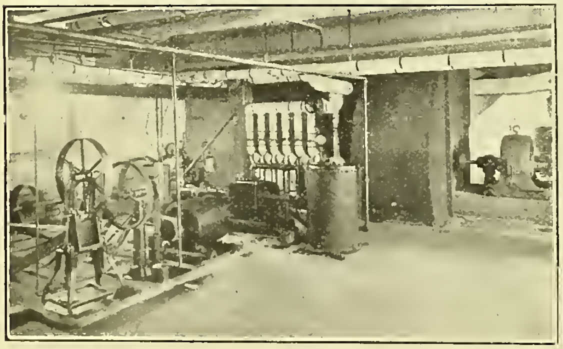
Professor John A. Easton, M.D

The Modern Trend of Pharmacy.

New Science Building.
(Principal entrance.)

A LONDON pharmacist, who for the first time visited the United States not long ago, was asked on his return what impressed him most in regard to American pharmacy. After thinking a moment of what he had seen, he replied, "The organisation of Messrs. Parke, Davis & Co. at Detroit." He proceeded to give some particulars of the things that impressed him in the great factory: the perfection of machinery, the methodical arrangements, the cleanliness, absence of waste, and other characteristics which distinguish the place apart from its bigness. Above all, he considered that the firm's grasp of the necessity for keeping pace with medical progress and scientific research (so far as it bears upon pharmacy) is in itself remarkable.

This opinion is shared by all whom we know to have visited these famous Detroit laboratories, which will by-and-by have their counterpart in the firm's grounds at Hounslow. But we are inclined to give the extra-industrial part of the organisation first place. It has always been a feature of Messrs. Parke, Davis & Co.'s methods to have a scientific staff whose time is solely devoted to investigation. Five-and-twenty years ago the work done was chiefly botanical. It will be remembered how Professor H. H. Rusby travelled far and near on their behalf, investigating the origin of new vegetable remedies. Coming down to the present time, we see the same spirit exercised in other directions, and this article is intended to give some idea of the latest development embodied in the new scientific laboratories, upon which the firm have spent 40,000*l.* of their capital.



Ventilating-apparatus in Basement.
A fan 10 feet in diameter, connected with electric motor, draws fresh air into the building through a filter in the corner and forces it into the rooms above. The vertical cylinder in the centre is a vacuum-tank connected with the analytical and bacteriological departments for vacuum-filtration, &c.

We mentioned two years ago that the firm had decided upon building a new place for research, but we have delayed further reference until the laboratories have been completed, so that we might show the modern trend of pharmacy with something like completeness. The firm have been good enough to have taken for us about forty photographs of the structure and arrangements, and from these we have made a selection to illustrate these notes.

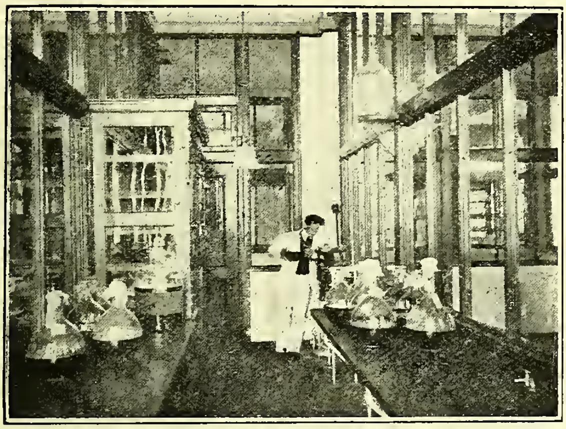
The building, which is of modern fireproof construction, stands directly upon the shore of the Detroit river, facing the south-east. We give an oblique view of it, the camera's actuality in this case not speaking so well as the architects' wash-drawing, but it is actuality. Before the architects set to work the firm sent a commission of experts to inspect the

Foremost Laboratories of the World,

and the report of this commission was utilised in drawing plans and making specifications. The building is 160 feet long, 60 feet wide, and three storeys high, with a basement, and is roofed with red tiles. The foundations were laid in concrete, resting upon piling driven from 35 to 40 feet below water-level. The walls are of hard brick, faced with paving-blocks, the trimmings being of Bedford stone. To separate the inner plastered surface of the walls from the solid brick portion, and thus guard against damp, it is finished with hollow brick instead of furring and lathing. The interior is supported upon steel columns, on which rest heavy steel beams, while the floors are of steel and concrete. A web of steel crosspieces extends from beam to beam, and is embedded in the body of concrete that constitutes the mass of the floor structure, and the walls and ceilings are finished in white adamant. Wood is used only for doors, windows, and certain fittings. The stairs are of iron, and the hoist is enclosed in a brick shaft with fireproof doors.

Planting-room.
The flasks contain bouillon, and the workers are introducing the pure bacterial cultures.

The principal entrance faces the river. Entering and ascending the building the visitor finds himself in a wide, open hall, from which corridors lead to right and left, opposite being an iron double stairway to all the floors. On the

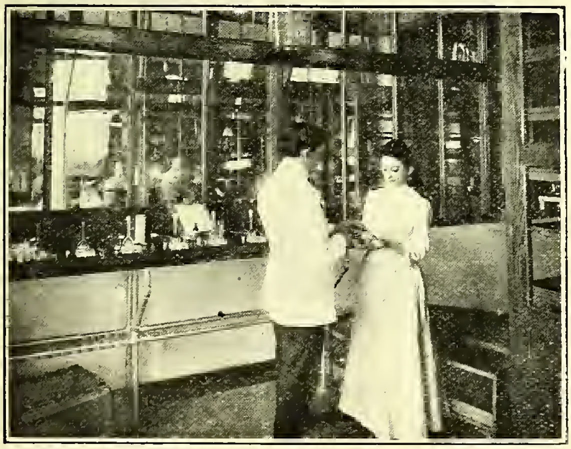


Filtering Tetanus-serum.
The room is used solely for this purpose.

right are a reception-room and doorway leading to the office of the superintendent of the vaccine and serum laboratories. Passing along the left corridor one observes that the rooms are separated from each other and from the corridor by glass partitions, such as are familiar to those who visit 42 Cannon Street. Going to the western end of the corridor, we notice a large room to which vaccine-virus is brought from the biological stables and mixed with glycerin in a machine fitted with glass rollers, until a smooth emulsion is formed. This emulsion is then placed in a refrigerator to "ripen," which takes several weeks. Between that and the filling-stage the lymph is subjected to rigid biological tests, and the laboratories contain ample provision for this delicate and important work. Leaving

This Busy Scene of Activity,

we proceed to a laboratory adjoining, where a bevy of young women, clad in white, are filling glass bulbs with antitoxic serums. The work-tables here are fitted with glass tops and polished-brass mountings, and the floor is paved with white tiles. It is an Eden of purity, for, apart from spotless cleanliness, the room is supplied with air filtered under pressure, which escapes through the crevices around the doors and windows, creating an outward draught that effectually prevents the entrance of dust or impurities. Across the corridor are rooms where serums are filtered, and the packages of vaccine and serum are labelled, wrapped, and prepared for shipment. In this corridor also is a commodious cold-storage chamber (temperature 2° C.), guarded by double doors, the inner one of glass, so that by turning an electric switch the interior is brilliantly illuminated for inspection without opening the room. Here serums, vaccines, toxins, and organic products, each in its isolated compartment, can be preserved indefinitely.



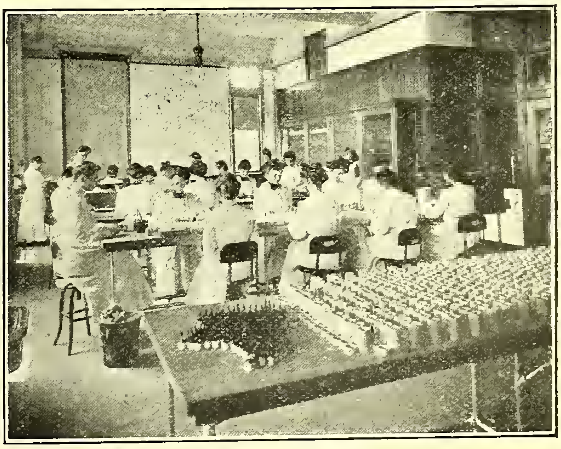
Injecting Serum into a Guinea-pig.
Potency is determined in this manner.

Black-leg Vaccine Laboratory.

In the eastern corridor is placed the "incubator," a large, well-lighted room, enclosed by double glass partitions, in which a constant temperature of 36·6° C. is maintained. Cabinets of shelving occupy the centre of the room, and within these are placed the containers of media in which

Germs are Cultivated.

As the germs multiply on the surface of the culture-medium they form toxins, which dissolve in the fluid, until at length a concentrated solution of virulent toxin is produced. This is *in vitrio* what goes on in the blood or tissues of the human body, but if the natural resistance of the body does not counteract the toxin, life is extinguished. Let us see how the toxin formed *in vitrio* is made to help man to resist that formed in his own body. We may take diphtheria as the example. The germ of this malignant disease is grown in a culture-medium (beef-bouillon) until a thick scum of the fungus forms on the surface, and the bouillon is saturated with diphtheria-toxin. This is the work of a few days.

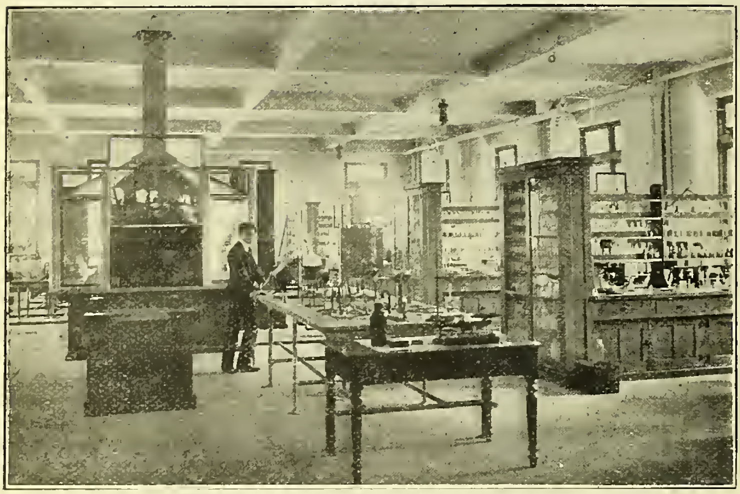


Filling Glass Bulbs with Serum.

The culture-medium is then filtered through porcelain to free it from germs, and a small quantity of the filtrate is injected into a healthy horse, which becomes feverish and slightly unwell, but shows none of the throat-symptoms of diphtheria. When the horse recovers, in a few days, a second and larger dose is given him, and so he goes on, getting larger and larger doses for months, until he can endure the injection of enormous quantities of the deadly poisonous fluid. Each stage in the treatment means that the horse's resistance to the poison is increased, and this resistance is due to the growth of antitoxin in his blood, so that the blood becomes Nature's antidote to the diphtheria-toxin. All that remains to be done now is to draw the blood, and separate the clot from the serum or fluid portion which contains the antitoxin. The antitoxic strength of the serum is then determined, and it is put up in glass bulbs for use. The antitoxins of certain other diseases are prepared in a similar manner.

In these laboratories there is provision for expert workers, who prepare pure cultures of the various disease-germs, and make permanent microscopic mounts of them for the use of students and physicians. They also make bacteriologic tests of vaccines, serums, toxins, and all other products of the biological laboratories. Their work-room is at the north-east end of the building.

In a room at the eastern end of the corridor blackleg, or symptomatic anthrax, vaccine is prepared. Returning to the centre of the building we pass on the left an apartment in which animals are injected for testing-purposes. They are brought up from the vivarium in the basement by means of a small lift. In an adjoining apartment a single attendant, clad in white, watches the filtration of tetanus-toxin, which is so virulent that a sixtieth part of a drop kills a guinea-pig. The germs from which the tetanus-cultures are made are obtained from garden-soil, in which they exist in great abundance. This explains why wounds of the feet by objects lying upon the ground so often result in lockjaw.



View in Analytical Laboratory.

Showing fume-chamber, stone-top work-table, and ends of working sections.

Other Apartments,

equipped with elaborate apparatus, all arranged in an orderly fashion, are passed in succession. In one, serums are filtered; in another, tubes of culture-media are prepared. Now ascending the staircase to the floor above, we find a similar arrangement of corridor down the centre with rooms on each side, as on the floor below. The various apartments are practically isolated from one another. Dircetly opposite the stair-head glass doors close the entrance to an excellently equipped library, on each side of which are the private offices of the chief bacteriologists. In the library, which is thoroughly representative of the scientific literature of all civilised countries, a bronze bust of Pasteur occupies a pedestal in a prominent position. Across the hall is the herbarium of 30,000 specimens, which has been transferred from the administrative building, where Professor Rusby used to have charge of it. A trained botanist is still in charge, and exchanges are kept up just as if the herbarium were a national institution, rather than a department in a commercial house.

Most of the rooms on this floor are utilised as special laboratories by research-workers in bacteriology, experimental pharmacology, and pharmacy; also for physiological assaying of drugs and physiological chemistry. Each apartment is thoroughly equipped with apparatus, and every facility is provided to encourage the workers.

Arriving at the Upper Storey

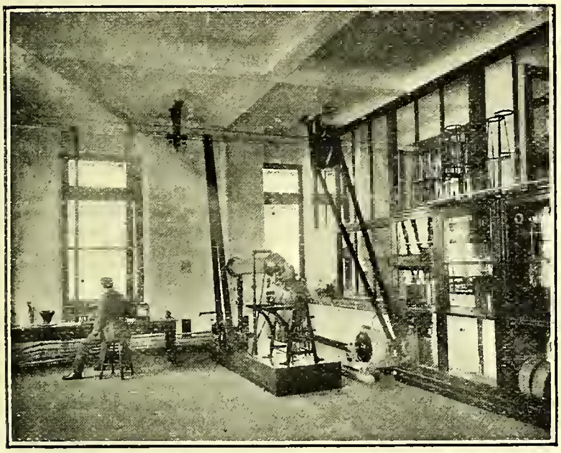
the visitor obtains a view of the large and splendidly furnished analytical and experimental department, which occupies the entire floor-area of nearly ten thousand square feet. Here a corps of expert chemists is at work: some in experimental pharmacy, others in assaying chemicals, crude drugs, or pharmaceutical preparations for standardisation. This laboratory is divided into two series of working compartments, each 14 feet by 15 feet, separated by low partitions—a plan that affords sufficient isolation for individual work, and yet does not interfere with the lighting, heating, and ventilation. In each section are two large windows, and so perfect is the illumination that except on very cloudy days the microscope can be used with entire satisfaction in any part of the room. Artificial light is supplied by arc and incandescent lamps, four of the latter being distributed over the working-table in each section. Cabinets containing shelving and drawers, and about thirty-five linear feet of table space, with the necessary reagent-racks, are provided in each compartment. The table-tops are constructed of maple, laid on in strips and bolted together, the whole being stained black and finished with paraffin. Each table is provided with a sink and hot and cold water. The ventilation is ideal. Each section is provided with a hood made of glass and iron, the outlet from which communicates directly with an air-conduit, 8 inches in diameter, through which fumes and vitiated air are mechanically drawn.

The central portion of the room, or space between the two rows of compartments, is occupied by dark oak cases containing chemical-apparatus, several work-tables of iron equipped with alborine stone tops, and two great hoods designed especially to accommodate large appliances. The stone tables, like those in the compartments, are provided with hot and cold water, steam, compressed air, mechanical vacuum, gas and water at high pressure for use with the aspirator. Down the centre of each table runs a lead-lined drain connected with the drainage system of the building. The hoods are made exclusively of iron and glass. The reagent-cases placed just outside the working compartments are equipped with about two thousand bottles of reagents and chemical and pharmaceutical supplies.

A dark-room for polariscopic and spectroscopic work is near the centre of the department. Rooms are also set apart for combustions, glass-blowing, and generation of offensive gases. There are also finely appointed cloak and toilet rooms and a model balance-room, the principal feature of which is a shelf of Italian marble, 14 feet long, 2½ feet wide, and 2 inches thick, supported, to prevent vibration, by iron beams set in the outer wall of the building. The walls of the room are finished with white enamel paint, and the cement floor has been treated with a paraffin preparation to reduce the tendency to the accumulation of dust. Extending entirely across the western end of the department is a fine well-lighted room, 20 feet by 60 feet in size, where a number of large pieces of apparatus have been installed, including drug-mills and ointment and mass machines used only in experimental work in pharmacy. Power is supplied by an electric motor, which can be placed in service instantly by the mere turning of a switch. A small steam-vacuum pan with the necessary attachments, evaporating-pans, and percolators are also placed here. At one end of the room are the sinks and racks where all apparatus is washed and dried.

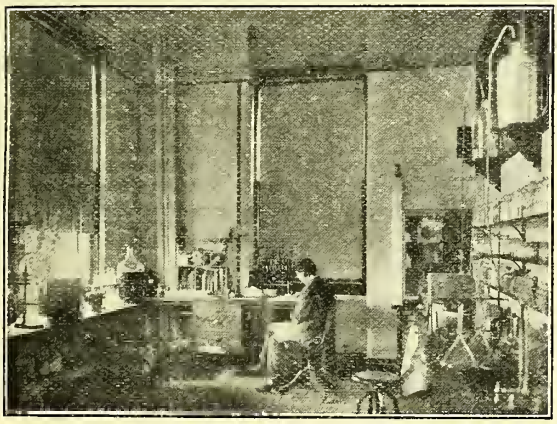
In the office of the chief chemist is kept a complete system of records of all research-work, assays, and tests. These records date back to the year of the foundation of the business, and constitute an invaluable mass of information. There is also on file here printed matter descriptive of the products of Parke, Davis & Co., and the preparations of other manufacturing pharmacists throughout the world, and brochures on miscellaneous scientific subjects.

We have now approached the roof, where the ventilating-apparatus is in evidence, but, without going into details, it will suffice to say that all the fresh air drawn into the building is filtered. The building is heated by steam delivered under high pressure from the central power-plant of the establishment, through a conduit 700 feet long. It is carried directly to the attic, where the pressure is reduced to one atmosphere, and the steam passed through pipes to radiators in the rooms below. The radiators are used only in the coldest weather, as the fresh air supplied through the conduits is usually sufficiently warm to make the rooms comfortable.



Section of the Analytical Laboratory.
Used for experimental pharmacy on a large scale.

Such is Messrs. Parke, Davis & Co.'s latest venture. It carries the moral with it; but we may state that the building is merely a small part of the firm's vast establishment: the general pharmaceutical laboratories, apart from the biological stables, would make a dozen such buildings, and the establishment boasts of a corps of well-trained guides who daily conduct visiting pharmacists through this remarkable "pharmacy."



Laboratory for Physiological Standardisation of Drugs.

"The principal ingredient in all these patent medicines is the same." "It must be a powerful drug. What is it?" "Printer's ink."

Trade-marks Applied For.

Objections to the registration of any of the undermentioned applications should be lodged with C. N. Dalton, Esq., C.B., Comptroller-General of Patents, Designs, and Trade-marks, at the Patent Office, 25 Southampton Buildings, Chancery Lane, London, W.C., within one month of the dates mentioned. The objection must be stated on Trade-marks Form J, cost £1, obtainable through any money-order office.

(*From the* "*Trade-marks Journal*," *June*, 24 1903.)

Picture of maiden gazing in a pool; for goods in Class 48. By Gustav Boehm, 38 Moreland Street, Goswell Road, E.C. 253,610.

Architectural design; for perfumery, &c. By the Patent Borax Company (Limited), 194 Ledsam Street, Ladywood, Birmingham. 254,552.

"Gloridia"; for perfumery, &c. By the Vinolia Company (Limited), Malden Crescent, N.W. 254,559.

"Ilyl"; for perfumery, &c. By H. W. Scurr and A. F. Stirling, 5 William Street, Wilmington Square, W.C., wholesale chemists. 254,639.

Combination of devices and the word "Lornine" ("Lorne" disclaimed); for a cement. By the Hardwood Pulp Company, 13 Lorne Street, Chorlton-on-Medlock, Manchester. 253,639.

(*From the* "*Trade-marks Journal*," *July* 1, 1903.)

"Toncit"; for photographic chemicals. By Chemische Fabrik Helfenberg Aktien Gesellschaft vormals Eugen Dietrich, 33 Cannon Street, E.C. 253,867.

"Petrox" ("Petro" disclaimed); for chemical substances. By Samuel Wills & Co., Castle Green Colour-works, Bristol. 254,569.

"Neutrite"; for a deodoriser and disinfectant. By J. T. Szek, 27 Campden House Road, Kensington, W. 253,735.

Combination of devices and the words "Star and Crescent"; for sulphate of copper. By Bessler Waechter & Co., 18 and 19 Fenchurch Street, E.C. 254,175.

"Plasmite" ("Plasm" disclaimed); for all goods in Class 2. By W. Wardle, 2 Rollestone Road, Burton-on-Trent. 254,627.

"Carbosil" ("Carbo" disclaimed); for chemical substances. By J. Crosfield & Sons (Limited), Bank Quay, Warrington, Lancashire. 254,751.

"Wilburine" ("Wilbur" disclaimed); for medical compounds. By Wilburine Oil-works (Limited), New York City, c/o A. M. & W. Clark, 53 Chancery Lane, London. 253,523.

"Kebre"; for medicines. By W. C. Kemp and J. A. E. Breeze, 88 Oxton Road, Birkenhead, Cheshire. 254,281.

"Neurone"; for medicines. By W. M. Bramley, 77 Rookery Road, Handsworth, Birmingham. 254,543.

"Oxella"; for medicines for human use. By R. McClumpha, 372 and 1 Westgate Road, Newcastle-on-Tyne. 254,909.

"Phenofax"; for chemical substances. By Henry Solomon Wellcome, trading as Burroughs Wellcome & Co., Snow Hill Buildings, Holborn Viaduct, E.C. 254,915.

"Flako" ("Flake" disclaimed); for a food for dogs. By Uveco Cereals (Limited), East Moors, Cardiff. 253,072.

Combination of devices; for a food-preservative. By Keeps (Limited), 39 Coleman Street, E.C. 253,493.

"Zythone"; for syrups in Class 42. By J. Sellers & Co., 11 Clerkenwell Green, E.C. 253,880.

"Prizetta" ("Prize" disclaimed); for articles for toilet-purposes included in Class 48. By G. Storton, 106 Wellingborough Road, Northampton. 254,144.

"Microl"; for perfumery, &c. By the Co-operative Wholesale Society (Limited), 1 Balloon Street, Manchester. 254,891.

(*From the* "*Trade-marks Journal*," *July* 8, 1903.)

"Lockaxe"; for photographic chemicals in cartridges. By E. Seeley, 30 Belsize Road, N.W. 254,072.

"Kudo"; for chemical substances. By McDougall Brothers, 68 Port Street, Manchester, Lancashire. 254,951.

"Poleeda"; for vegetable compounds as medicines for human use. By H. J. King-Potter, 56 Ludgate Hill, E.C. 254,511.

Device of ball on point of finger; for white-lead. By Brimsdown Lead Company (Limited), 34 Victoria Street, Westminster. 254,566.

Anæmia.

By Medico-Pharmaceuticus.

THE term "anæmia," if interpreted literally, is somewhat misleading. Its literal meaning is "want of blood," but the diseases which are known to modern physicians as anæmia are not due to want of blood, but rather to changes in the composition of the blood. The term would be more correctly applied to the condition which is caused by loss of blood, such as occurs after severe accidents and operations, and which is best treated by the injection into a vein of a large quantity of normal salt solution, on the principle of supplying the heart with a sufficiency of liquid to contract upon, and without which it ceases to perform its function. The ordinary clinical varieties of anæmia are to be regarded as conditions characterised by certain changes in the composition of the blood, and on the nature of these changes is dependent the modern classification.

In simple anæmia or chlorosis the quantity of hæmoglobin in each red corpuscle is reduced, and therefore the total quantity present in the circulation is reduced. In pernicious anæmia the individual corpuscles usually contain more than the normal quantity of hæmoglobin, but are much reduced in number, so that the ultimate result, as far as total quantity of hæmoglobin present in the circulation is concerned, is the same as in the last case. In leucocythæmia the total hæmoglobin is also reduced, but this reduction is due not so much to the poorness of the individual red corpuscles as to the enormous numbers of white corpuscles present.

In order to understand the essential distinction between these different diseases it is necessary to remember that each cubic millimetre of normal blood contains 7,000 white corpuscles or leucocytes, and 5,000,000 red corpuscles or erythrocytes. In pernicious anæmia the erythrocytes are sometimes reduced to under 1,000,000, while in leucocythæmia the leucocytes may rise to 500,000; by means of modern hæmocytometers this "blood-counting" can now be done with very great accuracy, and is a matter of routine in all well-conducted hospitals.

Pernicious anæmia and leucocythæmia are somewhat rare diseases and usually fatal. In the latter there is great enlargement of the spleen, and frequently marked changes in the lymphatic glands and bone-marrow. Of their cause and treatment very little is known; the uselessness of iron and arsenic in the treatment of pernicious anæmia seems however, to have been established, and the results which have been obtained by giving bone-marrow have been distinctly encouraging.

SIMPLE ANÆMIA, OR CHLOROSIS.

This disease is peculiar to the female sex, in whom it may occur at any age, but is most common between the period of adolescence and womanhood.

Cause.—Of the essential cause of the disease nothing definite is known. It is associated in some way with the development of the sexual organs, and also with bad feeding, overwork, and bad hygienic conditions. Sir Andrew Clark believed that it is a species of toxic-poisoning due to the absorption of ptomaines from the bowel. This view is now, however, entirely discredited, and it has been shown by carefully conducted experiments that when the constipation, which is a usual accompaniment of the disease, is cured, and the intestinal-canal treated with antiseptics, there is no improvement in the condition of the blood.

Symptoms.—The classical symptom is pallor, the skin usually being of a yellowish-green tint. This symptom is, however, very apt to be misleading, as it also exists in certain cardiac lesions and in Bright's disease, while, on the other hand, girls suffering from chlorosis sometimes have a rosy tint in their cheeks. There is breathlessness, palpitation, and a tendency to fainting. The eyes have a peculiar brilliancy, and the whites have a bluish tint; there is sometimes swelling of the ankles and puffiness of the face, symptoms which are also present in Bright's disease. The patients are usually well nourished, the subcutaneous fat being apparently excessive in amount, and this fact, associated with the peculiar pallor, usually makes a diagnosis easy. A good rough test is to let a drop of the patient's blood fall on a piece of white blotting-paper alongside of a drop of normal blood, when any deficiency in hæmoglobin will be shown by its pale colour. As mentioned above, the method adopted in hospitals is the estimation of the hæmoglobin by means of the hæmoglobinometer.

There are a number of other symptoms which, although they can only be detected by the trained physician, are yet of very great interest. For example, there are certain murmurs heard over the heart, and the so-called "bruit de diable," which is heard as a continuous murmur when a stethoscope is placed over the external jugular vein on the right side of the neck; the lungs are found to be slightly reduced in size, and return to their normal size when the disease is cured. The explanation of this reduction in size of the lungs is that there is less oxygen-carrying material in the blood, consequently less surface is required for the interchange of gases. The shortage of oxygen-carrying material (hæmoglobin) is also responsible for the breathlessness which is such a common symptom. Constipation, amenorrhœa, and dysmenorrhœa are frequent accompaniments of the disease, and are indeed the symptoms which most frequently bring the patient for advice.

Treatment.—Chlorosis is one of the few diseases (they can be counted on the fingers of one hand), the treatment of which is simple and certain. It can be summed up in two words—"Give iron." So well has this fact been established by clinical experiment that any apparent anæmia which does not yield to iron is not a simple anæmia. It matters little how the iron is given, but there is nothing to beat the ordinary Blaud's pills or tablets. The remedy should be continued for three months, and begun again if necessary, as recurrence is common. Attention should also be given to the constipation which is so frequent an accompaniment of the condition, and to overcome this there is nothing so effective as a suitable dose of Epsom salts given every morning before breakfast. Where the constipation has been very obstinate the bowel should be cleared out with a good dose of Epsom salts before beginning the iron-treatment, or even with a soap-and-water enema. The patient should be enjoined to get as much fresh air and light as possible, to avoid undue fatigue, and to take an easily digested and nourishing diet. How the iron acts in curing the condition is not known, Bunge's theory being now discredited; but that it does act is certain. The special favour in which Blaud's pills are held may be to some extent due to the alkali which they contain, and which acts by relieving the hyperacidity, which is a very frequent accompaniment of the disease. If a mixture is preferred, the following is a good one:

Ferri sulph.	gr. xlviij.
Mag. sulph.	ʒiss.
Aq. chlorof.	℥vj.
Aq. ad	℥xij.

Ft. mist.

One tablespoonful three times a day, after meals.

It is better, however, to give the aperient separately, as many cases cannot tolerate its constant exhibition.

"A Hit—a Very Palpable Hit."—*Hamlet.*

A man with a hammer stood mending a rail,
He hammered his finger instead of a nail.
The remarks that *he* made are not suited for print;
But he carries that finger about on a splint.

ALARMING THOMAS HOLLOWAY.—In the "Life of Sir George Grove," published recently, the following curious anecdote appears:—

> I was joking Anthony Trollope about the name "Bonteen" (the man who is murdered in "Phineas Redux"), and telling him what a creep it had given me to be asked to take a Mr. Bonteen down to dinner; and then I said I always fancied the name was an invention. "Oh, no," said Trollope, "I knew a Bonteen once, and a very droll thing he did. We were going along the Strand together, years ago, when he said 'Trollope, just come here for a moment. I want to go into a shop,' and we went into Holloway's—Holloway's pills. No sooner were we in than Bonteen jumps on the counter, and dances like a madman, waving his hat round his head. There were five men behind the counter making pills, and one of them said, 'Sir, you mustn't do that. Come down, or we must call Mr. Holloway.' 'Call Mr. Holloway,' says he. 'Do you know who I am? Look at me; my name is Peters. Three weeks ago I was a confirmed cripple. I've only taken one barrowload of your pills, and look at me now.'"

The Open-air Cure.

By A. C. Wootton.

THE interest excited by the munificence of Sir Ernest Cassel, followed by the wise decision of the King to devote his gift of 200,000*l.* to the establishment of a model sanatorium for the open-air treatment of tuberculous diseases, has directed some public attention to institutions of the character indicated at present existing in this and other countries. County councils are beginning to realise the importance of providing sanatoria in their districts, and at present there are, I am told, seven such institutions actually opened. It will not be long before this number is multiplied fivefold. There are besides about ten sanatoria which have been acquired by various hospitals, and are a distinct feature of their charitable work. Then, lastly, though first in point of time, come the private sanatoria where patients pay for their maintenance and treatment. As far as I can ascertain, these number about thirty in the United Kingdom, all being establishments where the open-air treatment is scientifically and exclusively carried on. From ten to fifty patients may be reckoned as the capacity of these establishments. In addition, about twenty homes where the treatment is adopted on a small scale, with half a dozen patients or fewer, should be counted. In all it may be estimated, I think, that somewhere between one thousand and two thousand persons more or less affected with tuberculosis are now under treatment away from their homes.

Although the open-air treatment of consumption was first advocated by medical men in this country, the credit of introducing the method systematically belongs to Germany. Hermann Brehmer established the first open-air sanatorium at Görbersdorf in Silesia in 1859, and his success induced other doctors to follow his example. There are at present more institutions of the kind in Germany than in any other country. Several of them are maintained by insurance companies, who thus delay the payment of the death claims to which they are liable. No better proof of the value of the treatment than this actuarial evidence could be desired. Dr. Otto Walther's establishment at Nordrach in the Black Forest has been most heard of in this country, thanks largely to the enthusiasm of one of his cured patients, Mr. J. A. Gibson, chemist, Edinburgh.

Switzerland, where the mountain air is particularly suitable to certain cases, has become a popular centre for these institutions, but some authorities have hinted that the tendency to minister to the attractions of the localities may furnish excitement instead of the rest and personal care which consumptive invalids need above all things.

In France sanatoria are now being founded rapidly, though until quite recent years that country was behind her neighbours. In the United States the treatment has been widely adopted. It is needless to say that the largest known sanatoria are to be found in America.

It has been abundantly demonstrated that the cure can be, and is, as effectively administered in the British Isles as in any foreign land. A dry soil, woodland surroundings, pure air, and pleasing scenery, are all the requirements as far as locality is concerned. Gently sloping hills, pinewoods, vegetable gardens, and some farm-buildings in the near neighbourhood, seem to be favourite accessories. A kind, cheerful, and competent, medical superintendent, a good cook, and a sensible matron, are besides essential. All these requirements can be had in British sanatoria at least as perfectly as in foreign ones. In some, bacteriological laboratories and Röntgen-ray apparatus are now installed.

The treatment is much the same at all places. The most striking variation is apparent in the sleeping-arrangements. It is becoming gradually more usual in the best sanatoria to house each patient in a special chalet. This system was, I believe, introduced first at Hailey Sanatorium. The chalets there are comfortably furnished little huts raised from the ground, provided with stoves, and with windows opening on every side. The plan is now adopted in many other establishments, either partially or exclusively. The authors of the King's prize essays all seem to indicate a preference for such a system, which was, however, barred by the conditions laid down. In other respects the King's sanatorium conditions are a little disappointing. It is intended to provide for eighty-eight poor patients and for twelve who can pay for their treatment. This stipulation was fixed by the Advisory Committee, consisting of physicians of such special experience as Sir W. Broadbent, Sir Douglas Powell, Sir F. Laking, Sir Felix Semon, Sir Hermann Weber, and Dr. Theodore Williams. In face of such wisdom criticism has no alternative to silence. The King's sanatorium, it is reported, is to be erected at Petersfield in Hampshire.

We have most of us known persons who, threatened by pulmonary disease, have apparently resisted it, and recovered from the danger after one or more sea-voyages, followed, perhaps, by a change from an indoor to an outdoor life. These cases, of course, testify to the value of pure air in unstinted supply, and I asked a physician of great experience in chest-diseases whether he would advise a long sea-trip in preference to treatment at a sanatorium. He said there were cases in which it might be better, but he thought these were not frequent. The stuffy cabin at night, he believed, is apt to undo the benefit of the fresh air on deck during the day; the difficulty of arranging for the requisite exercise is another drawback, and storms may have disastrous effects.

Carpets, curtains, woollen covers, and other furnishings which add so greatly to the comfortable appearance of English homes and English hotels, are conspicuously absent from the rooms of sanatoria. Nothing must be there which can collect or retain dust. The open bare windows, too, must strike with dismay the delicate patient who has probably been always accustomed to apartments as hermetically sealed as modern buildings will allow. To ill-fitting joinery, indeed, many of us owe the limited provision of oxygen which we get at night and for a great part of the day too.

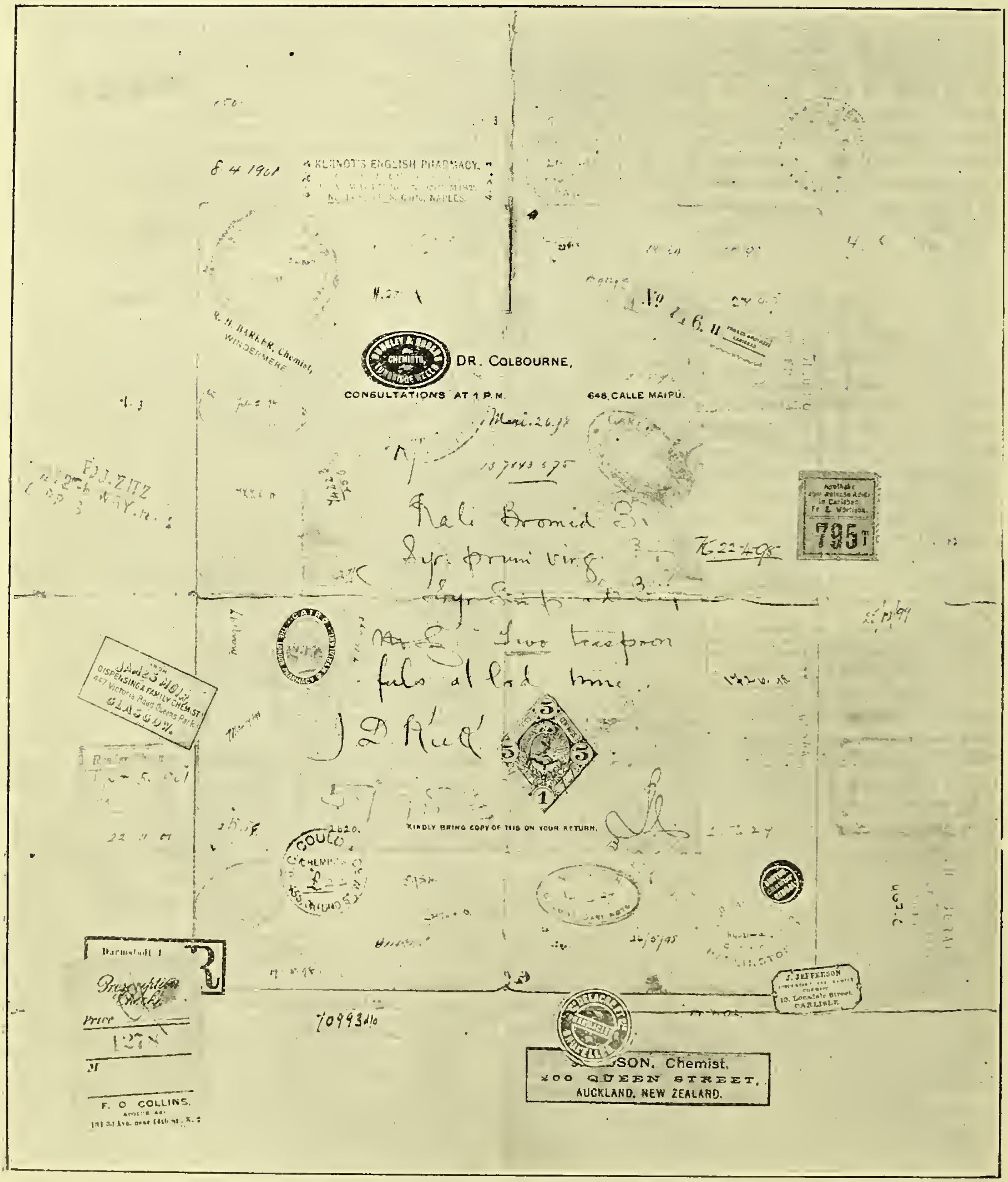
"You have to train your patients to this life gradually, I suppose," I remarked to the doctor in charge of a sanatorium when he was showing me the bedrooms.

"Gradual treatment is hardly necessary in any instance," he replied. "In a day or two the patients appreciate the benefit of sleeping in the pure air, and within a week they would clamour for it if it were denied them. Their rooms are properly warmed, they are themselves well fed, and neither rain nor snow hurts them even if these enter the open windows. Your lovely London fogs do not reach this locality."

The patient's life is necessarily one of comparative idleness, and it seems essential to guard against the admission of *ennui* or depression. But I am told that in practice these effects are not frequent. In all well-supervised establishments the day's occupations are carefully mapped out, modified, as they must be, in special cases, so that the time is not found to hang heavily. Periods of absolute rest two or three times daily are of great importance; these are generally prescribed before and after meals. Outdoor exercise is an important feature of the treatment, and the doctor's judgment in regulating this is one of the principal safeguards of a sanatorium. The gardens, the fields, the cattle, the country life generally, provide endless interest to many town-bred patients. Of permissible games, croquet for outdoors, and dominoes for indoors, seem to be the favourites. Cricket, tennis, and billiards involve too much exertion, while cards and chess have a tendency to excite and to raise the temperature. Life in a sanatorium is necessarily quiet and peaceful, and if it is too much so for some of the inmates they are still sensible enough to recognise that the restrictions are imposed in their own interest, and if only they feel themselves improving, as so many do, there is not much room for depression.

The fees paid in self-supporting sanatoria vary from three guineas to five guineas weekly. These cannot be said to be extravagant. The patient cannot be maintained for less than about 30*s*. a week; one doctor is required for every twelve to fifteen patients; cooks, matrons, servants, nurses have all to be paid; and the installation and equipment of a suitable establishment, without reckoning much for the land on which it is built, will be found to run to close on 500*l*. per bed.

A WELL-TRAVELLED PRESCRIPTION.



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SON, Chemist,
200 QUEEN STREET,
AUCKLAND, NEW ZEALAND.

The photograph on the preceding page is as good a representation as can be obtained of the most marked prescription we have ever seen. The violet ink of most of the stamps makes little impression on the photographic plate, hence the faintness of somc of the stamps. The following are the names of the places where it has been, the surnames of the chemists being added in parentheses:

Auckland, N.Z. (Judson)
Bexhill-on-Sea (Adams)
Brighton (Nossworthy, Perress, Smithson)
Buenos Ayres
Cairo (Myrialaki)
Carlisle (Jefferson)
Carlsbad (Kronen Apotheke, Worlicek)
Ceylon (Cargills)
Cork (Harrington)
Croydon (Culverwell)
Darlington (Harburn, Nicholson)
Darmstadt
Deal (Head)
Dover (Carfe, Thompson)
Eastbourne (Carter)
Edinburgh (Middleton)
Folkestone (Curtis, Stainer)
Glasgow (Frazer & Green, Moir)
Hastings (Blomfield, Walmsley, Ward)
Kendal (Severs & Bateson)
Kilmarnock (Boyd)
London (Allen & Hanburys, Allsop & Quiller, Gould, Goss, Munroe, Roberts, Rogers, John Bell & Co., Savory & Moore, Squire)
Naples (Kernot)
New York (Lynton, Reader, Collins, Eimer Amend, Caswell Massey & Co., Zitz)
Newcastle (Proctor)
Paris (Berral, Swann)
Penrith (Banks Swinburn)
Portsmouth (Holtom)
Richmond (Clarkson)
Scarborough (Field)
St. Leonards-on-Sea (Hasselby)
Southampton (Remnal)
Stockton-on-Tees (Mandall)
Tunbridge Wells (Batting, Dunkley & Rogers, Sells)
West Cowes (Riley)
Windermere (Barker)
York (Oakley, Wood)

At the Counter.

More Tynesiders.—A batch from Newcastle contains orders for "spiret & viletes," "Apsem salts," "salmonick acid," "Bognarpich," "appledale dock," "red pisicit," "scoppers of quills," "Hool scimmon" and "Casha." Another is a legibly written request for "Herrie it Ammion Citiates ʒij."

The Omniscient German.—Some time ago a business card relating to the sale of a mineral-water from a spring at Casas Viejas, near Malaga, was sent for correction to Mr. J. Lagares, who is manager of the Calpe Pharmacy at Gibraltar, and an excellent English scholar. The card is printed in Spanish on one side thus:—

> Curación Radical de los Padecimientos del estomago.
>
> El eminente Doctor D. Tomas Palop y otros reputados Medicos recomiendan el uso de estas aguas para el alivio de la Dispepsia Acida-dolorosa, Catarro intestinal, Afecciones del Higado, Herpetismos y malas digestiones.
>
> Agua Natural Minero-Medicinal Sulfhidrico-Sulfuradas-Bicarbonatadas.
>
> De CASAS VIEJAS (Malaga).

On the other side is the English "translation" which Mr. Lagares was called upon to correct. It was done by the traveller for a German drug-house, who felt glad to air his knowledge of our language. This is the Germano-Anglican version:—

> Radical Success.
>
> Cure all the stomach sicness. Medical and mineral water. Clasificated by the quimical Doctor of of the central university Madrid Mr. G. de Lapuenté Sulfuric bicarbonated of Casas Viejas (Málaga) Reputated doctors and pharmacisists recomended very hard this mineral water to cure such as dispepcias gastritis gastralgias liver bad digestions disordered stomach.
>
> Medical and mineral water —Sulfuric and Bicarbonatatéd.
>
> FRON CASAS VIEJAS MALAGA (Spain).

No wonder we are being left behind in the commeroial battle when the drug-trade of the Fatherland teems with such excellent linguists.

Oriental Curiosities.—From time to time selections of orders and advertisements in "Babu" English reach us from the East, and a further accumulation has now been received from which we cull a few choice items. It should be borne in mind that these are all written by men to whom English is a foreign tongue, and the fact that their own language is more or less a phonetic one explains the readiness of the Indian native to lapse into phonetic spelling. When an order comes for "Fanasitene," therefore, the chemist, unless he be a "griffin" in the country, takes no notice, but supplies "Phenacetin," and scarcely ever thinks of preserving the order for his scrap-book. It is only when the half-educated Babu tries to air his English by interspersing slang expressions that it becomes really laughable. The following letter was received by a firm of chemists in India. It comes from a native Christian:—

> Let me know the price of Anoy's fruit salt bottles and some other sarsaparillas or syrups, the purifiers of humane blood and givers of strengths and refreshments.

The same firm also sends us this missive:—

> It is eagerly hoped that you will be as good as enough to kindly send me a sheet almanac for 1901 through the bearer hereof—the price of which will be given to you by him as asked for, which it is earnestly requested that you will kindly give him the usual receipt and oblige me,
>
> Syed Zynool Abideen.

The mixture of dignity and deference is amusing. Among small orders we find "Obsam salt, 2 dr."; Eno's frout salt"; "Antibilyas Cocoos pills, 1 bottle." This last evidently refers to Cockle's pills, which were supplied. The following are gems in their way: "Clored of potay," "Tincker sincona compond," "Tincker Riyi," "Lecond acstraket (Liq. ext.) of damina," "Syrup grey malt sarspraílla," "Shigrafled," "Bismuth subnightdress," "Tincker half siamus," "Glassreen," "Thermamoter clynecale half minnet," "Ye Clipt's oil." Like the Babu who, when ordering the best quality of goods, told his tradesman to "blow the expense," the writer of the following is evidently anxious to avoid inferior goods, for he orders "Tincker iodern, 1st class, 1 ounce"; while another writer fills up a postcard in explaining:—

> I send a letter in your presence But I did not reply as yet. I have send a letter before Urdu but you did not send me things if you send me according that letter than not send me now.

Plate capnit	one 1 dozen
Lickramonia	1 oz. ounce
Gold	1 Tue
Assitate	1 oz.

That is all.

From Simla we get a nice collection, including facsimile orders for "Kelomal," "Magnaishia," "Sal emonak," "Tartar of Comras," "Naitry Keysit," "Tincheraideen," "Tincker of audin," and a request from Dowlat Ram for a bottle of (first class) sarsa perala.

A Selection of Verbal Requests.—The following are culled from town and country: "A bottle of Jame's onion-water," "A powder to remove a baby's bowels, please," "Two pennyworth of hydrophobia," "Two pennyworth glycerin, liquorice-powder, and chloride of lime lozenges," "A pen'north o' borrock's en 'unney for a baby wot's caught a thrush," "Bottle o' Spanish port; think it'll be good wi' some spanish in?"

Written Orders from Far and Near. — "3*d.* exyonpekeranapirine," "Pen armoanery," "2 cholard lime," "Phlydolflin pills," "Foster's paster," "Phyanasta powder," "Philicoca pills," "Elderpinirol," "Palm-lead potash," "One box semnitt of electra for piles," "Heck-pichu-ana wine," "Ralkman," "Catsy carra," "Marchmelor gums for sore trough," "Cut a curer soap," "Yalla Bazeliken," "2 pennyworth of maden blush," "Oil of jubeter," "Coff's longers," "Cloyod of lime," "Tormentherute," "K. S. S. line seed," "salts, seaney and spinsh," and "Ordsarn oil."

Variations.—From Ticehurst an ingenious little batch includes "Arrapaca," "Aspheditor," "Civeret powder," "Holeyclone," "Mazekiling ointment," and "Uplictuse." Paregoric for various sources is given "phorgororit," "perrigiric," "Pyrigiorde," "Parrygaric" or "Pargorat." Sp. ammon. arom. is asked for as "Salvie Latnie" and "Salvarlaterly." From Sunderland we have a fearful and wonderful selection of odd scraps of literature including orders for "Autamitic vinigar," "Hotic matic vinagar," "Spirts of Turpin and ballms of sulper," "Oil of rigsmant," "proxide of Higeion," "Heart stone and torpine," "Sapheron," "Blue Hungsen," "isirated potash & sarspella," "oxolice acied," "balsalm of Bequeivia," "fluite magnisha" (Down, Dinneford!), "bitter allwas" (too true!), "mach mllice," and "armonour." Our ever-present friend ipecacuanha is written "impecuana," "echpicahan," and "Hipequana," while guaiacum is "Guaguam" and "Tinkeroguagua."

Scott's Emulsion.

What it is and Why it is.

"You want me to tell you a little story," said Mr. Scott to the *C. & D.* representative who called upon him at Farringdon Avenue—"the story of Scott's emulsion? Well, it's not a long one, but I'll give you the facts."

"You started it?"

"I did, with my cousin, Samuel W. Bowne."

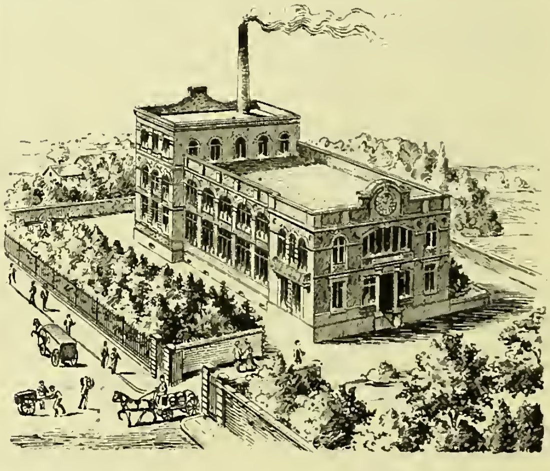
And so the story went on its way. We tell it in ours, and perhaps the way that Mr. Alfred Bowne Scott would prefer it to be told; for he is not addicted to giving people interviews about his business, and if this were to be taken as a precedent, his occasional visits to London from his retreat in Switzerland would have a terror added to them.

Alfred Bowne Scott.

Let us begin at the beginning—of cod-liver oil emulsions. Scott's emulsion is just one of them, exceptionally well made. It may be remembered that about 1870, some time after the writer of the "Carols of Cockayne" sang the dirge of ginger-wine, whose attractions had been ruined to him in consequence of its intimate relations with oleum morrhuæ,* certain pharmacists in England and America simultaneously produced cod-liver oil emulsion. It became remarkably popular between 1872 and 1875. This was not Scott's emulsion; indeed, the striking thing about Scott's is that it is the successor of failures, the only proprietary medicine that we know of which commenced with a descriptive title that spelt "nausea" to people who were familiar with it; yet Scott's has lived down that feeling and secured popularity in two hemispheres, while hundreds of pharmacists have been producing and selling an article of similar composition and name. One did not require to go to Mr. Scott to ascertain *that*—in fact, he did not say it. Success did not come to Mr. Bowne and him all at once. If it had, the story would not be worth the space given to it in The Chemist and Druggist. Neither of the young men had any money except what he earned, but the country in which they lived is a little more favourable than ours in forbearance towards uncapitalised enterprise. For a time they earned salaries and worked the emulsion in their spare hours; calling upon doctors and sampling them, calling on druggists and convincing them the emulsion was a thing that would do them credit to sell. This went on for seven years before they spent a penny in advertising, yet during that time they had established a place in New York well equipped and manned, had opened out in Canada, and got a secure footing in Spanish America. They had also conceived and put into practice one original idea—viz., wherever they went, *there* should the emulsion be made. We hasten to say they did not dream that within a quarter of a century the two Americas and Europe would be dotted with Scott's emulsion laboratories, for if there is anything which Mr. Scott's conversation conveys to one it is not that he and Mr. Bowne were clever fellows. You may get through a couple of his longest cigars and pepper him with questions the while without gleaning more pride than what comes from steady work.

Let us Glance at the Progress.

In 1884 Scott's emulsion came to England. It was almost a tentative effort, but it came and stayed. In 1888 it found its way to Spain, and a laboratory being fitted up there in Barcelona, another Latin country was attacked in Italy, where there is an excellent branch in Milan. Two years later Paris opened its doors, and there now Scott's emulsion has one of the most advanced pharmaceutical laboratories in the world, constructed on aseptic principles, with snow-white tiled walls and floors, and apparatus which works automatically, so that human hands do not touch the materials from the time they flow automatically into the mixers and thence to the bottles. To this ideal all the other laboratories approximate in the sense that they are forerunners in the same direction. A branch was opened in Portugal in 1890—the Latin countries, by the way, are, outside America, the greatest consumers *per capita* of Scott's emulsion.



The Paris Laboratory of Messrs. Scott & Bowne (Limited).

In the year 1895 Mr. Scott and Mr. Bowne dissolved partnership, Mr. Bowne taking the Americas and Mr. Scott the rest of the world. In America the headquarters are at New York, with branches in Toronto, Havannah, Caracas,

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* This is already told in "Pharmaceutical Formulas."—Editor.

Mexico City, Buenos Ayres, and Valparaiso. In Europe London is the headquarters. When the partnership was dissolved Mr. Scott consolidated the European interests in the organisation Scott & Bowne (Limited), and he appointed his friend Mr. R. J. Davis as his lieutenant, to take charge of headquarters when he is elsewhere. The European branches were completed with one in Switzerland, opened in 1900, and at Frankfurt in Germany a year later. In the same year a laboratory was opened at Sydney, N.S.W., to supply the Antipodes.

This rapid historical outline leaves many gaps unfilled, although it may suffice to make prominent the unique fact about this proprietary article—viz., that

Where it is Most Used it is Made.

There are a few other medicines with several branches, but Scott's emulsion is the only article we know of made alike by two distinct firms, who are not competitors, and who between them have fifteen laboratories.

Another point: outside Austria, Germany, and France, the Scott's emulsion-label on the front of the bottle is in English. In other countries, where English is not the spoken language, an additional label in the language appropriate to the country is put on. The same style of bottle is used everywhere, and is peculiar to Scott's emusion. Thus the same package with the slight modification of label, necessitated by the country, can be purchased all over the world. It is the commendable custom of the house to encourage each of these separate branches to buy everything locally, except when that cannot be done economically. This does not apply to the chief ingredient, for as that comes from one country (Norway), and the house knows which are the best brands, collective buying is most effective. This reminds us that the trade-mark for Scott's emulsion (the familiar picture of a fisherman with a cod longer than himself on his back) is a true Norwegian picture. Mr. Scott saw the subjects of the picture in a public square in Bergen twenty years ago, and when the photograph was taken he arranged to have a copy of it as a trade-mark, which has since been registered in every country in the world.

We have said that the London house is headquarters for the Eastern hemisphere, and it is interesting to note that hither come sample bottles every day from every one of the branches. We saw dozens of them in Mr. Scott's room, and tried to pick out those that were unlike, but could find none. In London and the branches which are controlled from it there are over six hundred employés, most of whom are engaged all the year round in making up Scott's emulsion. The rest help to sell it. At the chief laboratory in London an analytical chemist is at all times engaged in testing all the materials that are used in London and the branches, thus assuring perfect purity. This takes us to the administration threshold, but we need say no more of what goes on within except that Mr. Scott spends most of his time in visiting the European branches, while Mr. Davis stays in London, the centre of the business; for although the branches make and send out emulsion, every bottle is invoiced from London, with the exception of two countries, where they are locally invoiced.

Headquarters of Scott & Bowne (Limited), 10 & 11 Stonecutter Street, E.C.

It will be of interest to users of Scott's emulsion to note that although there is this year a universal scarcity of cod-liver oil, Messrs. Scott & Bowne (Limited) are not affected by the empty market. The firm have always carried forward a large supply of the highest-grade Norwegian oil, and did so as usual in 1902. Scott's emulsion will therefore contain its standard percentage of the finest medicinal oil, and the price of the emulsion has not been affected by the rise in the price of the oil.

Advice to those Suffering from Toothache.

Teeth are "running to decay,"
Stop 'em!
Don't defer another day,
Stop 'em!
Teeth you cannot go without,
There are some I have no doubt
Who will gladly chuck 'em out,
Stop 'em!

Sago and Tapioca.

By J. R. Jackson.

UNDER the commercial name of tapioca we have a valuable food-product almost identical with cassava-flour or cassava-meal, all of which are the produce of the large fleshy tuberous roots of two euphorbiaceous plants—*Manihot utilissima* and *M. Aipi*, the first known as the bitter and the second as the sweet cassava. Both plants are half-shrubby or herbaceous perennials, supposed to be natives of Brazil or some part of South America. The fleshy roots not only contain much starch but also a quantity of milky juice, which has always been stated to be poisonous in the bitter cassava but harmless in the sweet—a statement which even now is often repeated, though so long ago as 1877 the Government chemist at Trinidad showed from his own experiments that the sweet, like the bitter, yields considerable quantities of prussic acid, which statement has quite recently been confirmed by Professor Carmody, the present Government chemist at Trinidad. The quantity of the poison yielded by the two species is stated to be so nearly equal that "by mere chemical analysis it would be impossible to distinguish between the two." Professor Carmody has, however, shown that "whilst in bitter cassava the prussic acid is distributed more or less uniformly throughout the tissues of the root, in the sweet cassava it is located chiefly in the skin and outer portion of the rind." It follows that in order to prepare sweet cassava so that it may be a safe food for human beings the following precautions should be taken: Carefully scrape off the skin and outer portion of the rind whereby the greater portion of the poison will be removed. Next thoroughly heat the remainder by boiling or otherwise, so as to destroy and drive off any remaining prussic acid; further, cassava should be eaten only after it has been freshly cooked. Thus prepared, sweet cassava is a thoroughly wholesome and valuable article of food. It is chiefly from the bitter variety that cassava-meal and tapioca are made, which is done by scraping and grating the root and carefully removing the milky juice by expression, after which the meal is thoroughly washed, when the starch separates, and is dried and granulated on hot plates, the heat dissipating any remaining poison and causing the tapioca to form into the agglutinated masses in which we see it in commerce. The raw expressed juice, boiled and concentrated, also becomes wholesome, and under the name of cassareep is used for culinary purposes in the West Indies, and is imported in quantities to this country as a basis for table-sauces. Cassava is very extensively cultivated throughout the tropics, especially in South America, West tropical Africa, and the Straits Settlements, whence we import this wholesome and nutritious food.

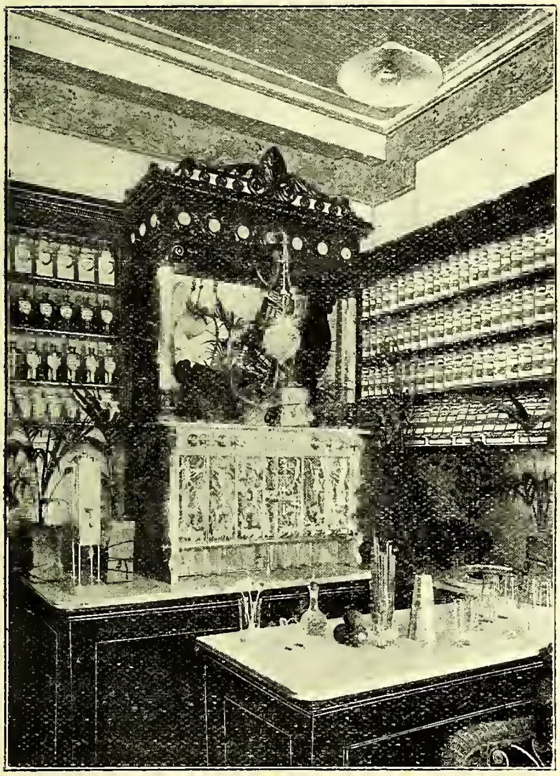
Cassava or Tapioca (*Manihot utilissima*) and Root.

Sago, as known in English commerce, is limited in its origin to two or three palms, but the word "sago" has generally a wider application than either of the foods already mentioned, for it is given to many products of a similar character to true sago produced in different parts of the world. The sago known in British commerce is obtained from a large palm—*Metroxylon Sagu*—which is found abundantly in Sumatra and the neighbouring islands, as well as in Java, Malacca, Siam, and Borneo. Like most palms, it has a straight, cylindrical trunk, 40 to 50 feet high and 1 to 2 feet in diameter, marked for a good distance down with the bases of the fallen petioles, and clothed with thick brown or blackish fibres. Under these fibres the outer woody portion of the trunk is very hard, but it is of no great thickness, and by far the largest portion of the trunk is filled with a soft, cellular, spongy substance of a buff-yellow colour. It is from this that sago is procured, and to obtain it the trees are cut down and the trunk cut up into equal-sized pieces, which are split down the centre so that the whole of the medullary substance may be scraped out and thoroughly washed in clean water. The starch is thus separated by a system of filtration, and finally granulated or pearled by passing the starch-mass through sieves with different-sized meshes, the whole being finally roasted, or, more properly, dried. Pearl sago occurs in commerce in different-sized pearls, usually varying from that of a pin's head to a small pea, but sometimes very much larger in size. So large is the yield of sago on some plantations that it has been estimated that three trees will furnish more food than an acre of wheat, and six trees more than an acre of potatoes. It is definitely stated that from 500 lbs. to 600 lbs. of good sago may be taken as the average yield of a good tree, and as

Sago Palm (*Metroxylon Sagu*) and Fruit.

much as 800 lbs. has been known to be so obtained. With regard to the nutritive properties of sago, the meal which is largely consumed in the Moluccas is made into a coarse kind of bread or cake, 2½ lbs. of which is said to afford a good and sufficient amount of sustenance for a man on very exacting manual labour. These facts, taken in connection with the abundance and cheapness of sago, lead one to think that it ought to be much more extensively used than it is.

IN A THIRSTY LAND.



At the corner of Bree and Wilhelm Streets, in Johannesburg, stands the pharmacy of Mr. J. H. Dinwoodie. It looks none the worse for the owner's absence during the war, when he had to clear out, and found scope for his activities as a dispenser at one of the base-hospitals. Returning to the old place in double harness, Mr. Dinwoodie set to work to retrieve his fortune. A travelling representative of the *C. & D.*, who was in Johannesburg in May, heard that Mr. Dinwoodie's latest venture was a soda-fountain, and we have received from him a photograph, with the following notes of a conversation about it:

"Good-day! Mr. Dinwoodie. I have called to see your American soda fountain which I hear you have got."

"Have you? Well, it's there—round the corner, in the next department. Come and have a drink."

I saw that it was a very elegant apparatus, and wonderfully set up.

"Why did you send for such a large machine?" I asked the genial Scot. "Would not a smaller one have suited your purpose?"

"Well, for many years I have been prejudiced against any sort of beverage being dispensed in a pharmacy, and it was with the greatest reluctance that I consented to this. The climatic conditions are more favourable to a fountain-trade here than in America. We have six weeks mild winter and the rest of the year warm sunshine. Johannesburgers are rather a thirsty lot, and the demand for these beverages, since the war especially, has been abnormal. So it was plain to me it had to come, and I thought one of 'Matthew's best' would, in the end, pay better than a toy, and the freight and railage is practically the same."

"I like the way you have placed it."

"It was the most suitable method I could think of, so that it would not interfere with the pharmaceutical business. I made this separate entrance to it from Bree Street, placed that three-sided dispensing-screen, 7 feet high, between it and the sales-department, and put an American in charge, who has no other duties."

"Are your prices not rather high—6*d.*, 1*s.*, and 1*s.* 6*d.*?"

"I think not—when you remember that rents are greater here than in Bond Street, salaries three times as high, and fresh cream and eggs still at war-prices. Besides, the Johannesburg people don't object to pay a long price for a good article."

"Are you satisfied with the business?"

"Yes, that's all right; but the fountain took a very long time to reach Johannesburg from the day of indenting. I must say that I think the Germans are the best packers and most expeditious shippers to South Africa."

We notice by the large photograph that the speciality displayed on the shelves to the right is effervescent saline, and under the shelves is a "Nimbus" tumbler-washer—a most ingenious arrangement for simultaneously washing the inside and outside of a tumbler with brushes and cold water.

ANSWERS TO CORRESPONDENTS.

By Henry John.

Historian.—Alexander the Great has been dead some years. He was not a forbear of Alexander the Cross.

Apprentice.—No; there is no connection between quicksilver and the nimble sixpence, and it is not considered to be good pharmacy to warm a mortar on the kitchen-fire. Try cayenne pepper. Incompatibility of temper does not refer to metals, and has nothing to do with dispensing. As your master is a married man, ask him for a definition.

Argent. Nit.—If the lady used the hair-dye as a face-lotion, it is a very unfortunate circumstance; but you are certainly not liable to be cast in damages.

Liquor Trinitrini.—We are not quite sure. The penalty is 100*l.* per day. As what was left of him was not large enough for a Coroner to sit upon, we should preserve the attitude of the Sphinx. Buy the preparation in future.

Ant-killer.—The following is a reliable formula: Arsenic, ʒj.; treacle to ʒiv. Label, "Harmful to domestic animals." Half-a-crown does seem a small price, but you must give plenty for the money to begin with; you can reduce the size later on.

B.Sc. Pharm.—We do not think it would be considered "infamous conduct" in a professional sense to sit in your window in your cap and gown. "Daisy" may give you points.

Carboy.—If the man pulled your nose, he undoubtedly committed a technical assault, and you can summon him. As regards the other matter, you cannot sue him for damages, as you threw the pestle.

Limited Company.—If one unqualified person keeps open shop for retailing poisons, he may be fined; if seven persons combine, they may do so with impunity. If one man goes poaching at night, he gets fourteen days; if seven go together, they can get anything up to fourteen years. This is another instance illustrating the fact that it is as well to have your company limited.

In "Ansonia" a building of residential flats opened in New York last year, a chemist's shop is in the basement, alongside the cigar-shop and above the cold-storage apartment.

The Brown Rot of fruit is one of the most destructive and widespread of the diseases with which fruit-growers have to contend. Apples, pears, plums, cherries, and peaches attacked by this disease do not rot and decay, but become dry and mummified. Such fruit often remains hanging on the tree until the following season. As preventive measures, all dead twigs and shrivelled fruit should be collected and burned during the winter. Afterwards, the trees and the ground should be drenched with a solution containing 25 lbs. of sulphate of iron and 1 pint of sulphuric acid in 50 gals. of water. The acid is poured upon the sulphate, and the water is added by degrees in a wooden—not a metal—vessel. Spraying with this solution in January and February is recommended, before the buds begin to swell. Spraying with weak Bordeaux mixture may afterwards be resorted to, and the whole line of treatment must be continued over two seasons. This is the substance of a leaflet (No. 86), dealing with this subject which has just been issued by the Board of Agriculture.

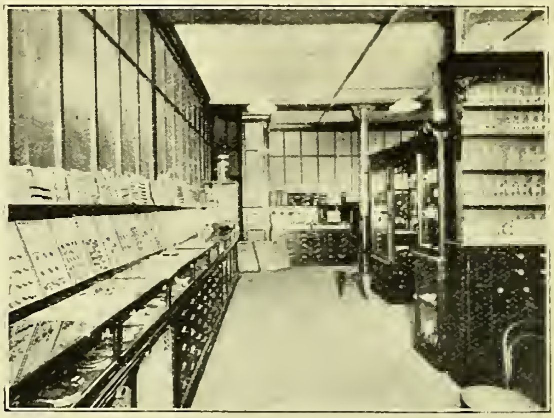
Our Town Traveller.

MY investigations during the past few days have been primarily devoted to the peculiarities of architecture. No fewer than three firms well known in the drug-trade have found it necessary to so extend their accommodation that they have been obliged to acquire new quarters altogether. This acquisition of area does not quite coincide with the inevitable plea of "slow business" I have so persistently been greeted with on all hands; but there are optimists as well as pessimists in the drug-trade, and I am inclined to think that the former prevail. One of the finest new buildings I have visited recently is that of

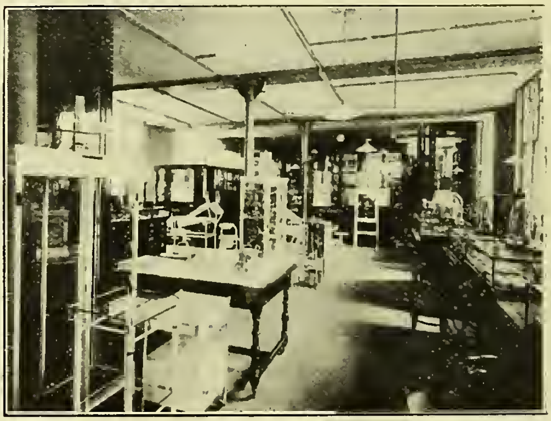
Lynch & Co. (Limited),

in Silver Street, Falcon Square, E.C. In our issue of February 28 (page 373) I indicated the transformation that was taking place, but it was only the other day that I saw the finished product. The illustrations give some idea of the finish and solidarity of the internal fittings. The exterior of the building was illustrated in the advertisement pages of The Chemist and Druggist of March 28. Silver Street, Falcon Square, is only a stone's throw from the building in Aldersgate Street, so long inhabited by Lynch, but the buildings both externally and internally are not to be compared. The new premises consist of four storeys and a basement, each floor occupying 4,000 superficial feet, and the powerful hydraulic lift for goods outside and the daintier passenger-lift for explorers of the interior are features that make for expedition and comfort. The fittings of the first two floors are in solid mahogany, and when the grateful sunlight can no longer be requisitioned—and that is not too quickly, for the lighting is admirable—there is a plethora of electric bulbs to brighten every corner. Passing through the spacious entrance-hall, where town orders and customers are attended to, Mr. Winter, one of the directors, piloted me through brass-bound mahogany portals into the bright, well-furnished showroom (30 feet by 40 feet). In the showroom is a completely fitted chemist's shop, and very enticing it must prove to the eager pharmacist with 200*l.* to spend on mahogany fittings. The shop is complete with showcases, wallcases, prescription department, desk, shop-bottles, ointment-jars, perfume-sprays, and sundries. On the dispensing-counter I saw a new tablet-machine (the "Eureka") and a machine for making suppositories by the cold-process. These machines Messrs. Lynch & Co. are agents for. They are manufactured by the F. J. Stokes Machine Company, of Philadelphia, and cost 6*l.* 5*s.* and 4*l.* 10*s.* respectively. The stockroom for fancy goods is behind the showroom—a great convenience—and the counting-house behind that. These rooms, as well as rooms for the buyers and lavatories for customers who are in on business, may be reached by a passage leading directly from the front door, so that the showroom need not be traversed at all unless business is actually to be done there. On the second floor is the surgical-instrument department (40 feet by 50 feet), a fine, lofty, well-lit compartment, filled with aseptic furniture for hospitals, operating-tables of the latest invention (some of them of intricate mechanical ingenuity), and every kind of surgical instrument that surgeons require. A cosy little fitting-room for the use of customers is also on this floor. The fitting-room is nicely furnished, comfortably carpeted, mirrored, and bright, and there are male and female attendants at hand. Near by is a room with desk and writing-materials for the convenience of country or suburban customers who desire to do a little quiet correspondence while in town. At present this room is being used by Mr. Winter and his assistants for the compilation of Lynch's new catalogue, to be issued on January 1, 1904. At the back of the surgical-instrument showroom, enemas, syringes, breast-relievers, and so forth are fitted.

Chemist's Shop in Corner of Showroom.


Part of the Showroom.

The third floor is devoted to pill-boxes, loofahs, teats, soothers, carboys, seltzogenes, and other miscellanies of the trade. The "Falcon" soothers are the latest of their kind. A room is set apart for feeding-bottles—the "Lynchgate" feeders are so numerous that they need a repository for themselves. There is also a separate department on this floor for the "Canopy" stoppered bottles. These also are booming, and are used in the new dispensaries at the London Hospital inspected by the King the other week. On this floor also there is a sponge-room for showing original cases, and honeycomb, Turkey, and other sorts are always on view. The packing of fancy goods is carried out on the fourth floor, where girls are busy bottling household and toilet remedies. In a separate department on the same floor the


The Surgical-instrument Department.

cabinet-makers are at work, and mechanics are making and mending surgical instruments and appliances. Cabinet-making on the premises is a new feature of the business, and, judging by the specimen showcases to be seen in the showrooms, excellent work can be turned out. A strong crane on this floor lifts the heavy goods required directly from the street. Messrs. Lynch now undertake shop decorating and fitting of all kinds. Among the novelties on this floor is Lynch's patent label-damper. This is an ingenious method of damping on the principle of capillary attraction. The damper is in the form of a wide-mouthed glass jar with an open cone-shaped bottom. The jar is corked, and the cork pierced with three glass tubes, each containing cotton. A piece of lint is placed over the top of the cork, and a black cloth damper is fastened tightly down over all by means of a brass ring. When in use water is poured into the bottom of the jar until it reaches half-way up the cone and covers the end of the cotton strands. The moisture ascends by means of the cotton to the damper above. The label-dampers cost about 8*s.* per dozen, and they retail at 1*s.* each.

The basement of the premises is partly filled with bottles the front part being enclosed as a packing department. One corner is reserved for the export department, and I saw large consignments of goods ready to be shipped to South Africa, where business has been exceptionally brisk in "Lynchgate" goods recently. There are almost one hundred people employed in the building, which has the further advantage of adjoining one of the grateful open spaces found here and there in London. The green oasis, with its waving trees and its grey tombstones, is the site of the Church of St. Olave, Silver Street, "destroyed by the Dreadfull Fire in the year 1666."

My second adventure in the search after new buildings took me to Carter Street, Maplin Street, Mile End, where

Mr. E. Youldon

has instituted the East London Glass-bottle Works. Mr. Youldon has acquired about 12,000 superficial feet of ground, with the option of purchasing another 5,000 or 6,000 feet when occasion demands. There he has built new offices and warehouses, and on a separate part of the ground he has constructed two furnaces, while another is in anticipation. This combination of office, warehouse, and works is naturally an extremely handy arrangement, and as everything is on the latest principle increased business may not unnaturally be expected. The buildings are compact, well arranged, and well lighted. Beside the office is the showroom, where all the usual samples of bottles in their apparently endless variety are shown. There also I saw a model of a special triangular-shaped bottle, for which Mr. Youldon has got an order. A door leads directly from the office into the warehouse, the bottom floor of which is used for packing and for heavy stock. This floor and the one above are 28 feet by 60 feet each. The stocks on the bottom floor comprise fifty or sixty different sizes and kinds of flat-shaped bottles. The second floor is the stockroom for essences, ovals, rounds, glass-measures, opal pots, screw pomades, limes, kalis, and shop-rounds of all kinds. I saw there a new shape in dispensing-bottles. It is a white flint, with rounded corners and shoulders, and it sells at the same price as the ordinary "medical" bottle. Pharmacists with an eye for the uncommon will be attracted by it. Sizes of from 2-oz. to 8-oz. are kept in stock, but larger or smaller sizes may be easily made. I noted also stocks of glass and earthenware funnels, glazed and marbled earthenware inhalers, and mortars and pestles. Screw pomades seem to be a speciality of Mr. Youldon's, and he has several very cheap lines in stoppered shop-rounds and heavy panels. White and blue Mexican flats, opal panels, and some very heavy tobins attracted my notice before stepping across the yard to watch the men at work making ink and castor-oil bottles in the moulding-sheds. There Mr. Youldon explained the whole art and mystery of bottle-making, and an interesting half-hour it proved to be. Most of my readers know how bottles are made, so I need not endeavour to retail imperfectly what to them is ancient history. The department which most impressed upon me the importance and variation of the bottle-trade was the room in which the iron moulds for shaping the bottles are kept. On shelves round this room are ranged and numbered separately almost a thousand different moulds. These cost about 30*s.* each, so that the initial outlay in this department alone is an item not to be despised. About forty employés are engaged, the glass-blowers working, of course, night and day shifts. One man was making penny ink-bottles when I was there, and, working steadily as they have to do, Mr. Youldon reckons that each man can turn out from twelve to thirteen gross of these bottles per day.

"Nothing doing," say the grumblers, and even the cheerful Mr. Phillip Josephs, sanguine senior partner of

Phillip Josephs & Son,

complains that business is not what it ought to be. Yet Messrs. Josephs have recently acquired a freehold property in Danbury Street, Islington, covering over a quarter of an acre of ground and comprising eight workshops. The shops form a triangle round a fine open yard which lately cost Messrs. Josephs 1,000*l.* to asphalte and re-drain. The buildings are not new, having been acquired with the property, but they have been admirably adapted for Messrs. Josephs' business. Six of the eight are 140 feet long, and each is devoted to a separate stage of the quick shopfitting-trade—joinery, polishing, preparing, drawer-making, fitting-up, and so on. All told there are about one hundred and fifty employés. I walked the length and breadth of the new factory with Mr. Josephs the other day and noted all the arrangements he has made for rapidly fitting up chemists' shops. Each article of shop-furniture is kept ready in so many parts, all of which are put together without delay or trouble whenever the order is given. I saw at least 2,000*l.* worth of mahogany in slabs and in a finished state, and Mr. Josephs assured me that he stored more dry pine than many a timber yard. I gazed upon dozens of dispensing-screens, perfume-cases, glass and fronted serving-counters in various stages of construction. There were stacks of shop-drawers and miles of plate-glass shelving. The plate-glass alone must represent about 1,000*l.* Perhaps the most striking thing in the survey next to the ingenuity shown in being prepared for fitting-up in the minimum of time is the carefulness and solidity of the workmanship, the absence of nails, &c., and the prevalence of dovetailing. I saw photographs of a chemist's shop in Kilburn recently fitted by Messrs. Josephs which is a good example of elegant fitting, and Mr. Josephs is particularly proud of a fine piece of work his firm have recently done in Cheapside for a big firm of oculists. The shop is an elaborate double-fronted one with double-glassed doors and several testing-rooms inside. The contract stipulated that the work be finished in three weeks, with a fine of 5*l.* a day for every day over the stated period. Messrs. Josephs performed their part of the contract within the three weeks to the entire satisfaction of their clients, and with credit to themselves.

Business Changes.

Messrs. Plumley & Son, Bristol Bridge, Bristol, are having their windows refitted in an up-to-date style.

Mr. Walter Bean, corporate accountant, has removed from No. 40 to Nos. 174 and 175 Aldersgate Street, E.C.

As soon as the necessary alterations and refitting is completed Messrs. Hodder & Co. (Limited) will remove from Broad Street to more extensive and central premises in Wine Street, Bristol.

Messrs. Robert Gibson & Sons (Limited), medicated-lozenge manufacturers, Manchester and London, have removed their London offices from 1 Glasshouse Yard, Aldersgate Street, E.C., to larger and more convenient premises at 4 New Zealand Avenue, Barbican, E.C.

Sanosin.—There has been some inquiry in London regarding the origin of this proposed remedy for tuberculosis of the lungs which has been recommended by Sommerfeld and Daneluis. It is said to be composed of eucalyptus-leaves, sulphur, and charcoal, hails from 52 Krausenstrasse, Berlin, and several London houses are agents.

Legal Reports.

Trade Law.

Eau de Cologne.—In the action Johann Maria Farina gegenüber dem Jülichs-Platz, Köln, *v.* Theodor Pantenburg, Köln, the firm J. M. Farina gegenüber dem Jülichs-Platz, Köln, has been authorised, by decision of the Cologne Royal County Conrt and Upper County Court, which decision has been ratified by the Imperial Court, to publish the following notification at the cost of Theodor Pantenburg, Köln:

"The accused merchant, Theodor Pantenburg, Cologne, is prohibited, under penalty of a fine of 50m. for every infringement, from using the style Johann Maria Farina & Cie. gegenüber dem Josefsplatz, and from asserting himself, or through third persons by circulars or any other notification to the public, that a partner of the firm has come, by legitimate inheritance, into possession of the original prescription of the genuine eau de Cologne, and that the firm received awards at the New York Exhibition of 1853 and the Dublin Exhibition of 1865."

The above is a translation of the announcement which appeared in the advertisement-pages of a recent number of the *Kolnische Zeitung*.

Are Defence Associations Trades Unions?—In the Second Division of the Court of Session, Edinburgh, last week, before the Lord Justice-Clerk and Lords Trayner and Moncrieff, judgment was given in an appeal from Sheriff Rutherfurd, Edinburgh, in an action by the Edinburgh and District Aërated Water Manufacturers' Defence Association (Limited) against James Jenkinson & Co., aërated-water manufacturers, Leith, for payment of 43*l.* 2*s.* 6*d.*, the amount of a fine imposed upon the defendants by the Association in consequence of their contravention of one of the by-laws relating to the use by members of bottles, &c., other than their own. Both the Sheriff-Substitute and the Sheriff-Principal of Edinburgh had found for the Association, but the Division recalled the judgment of the Sheriffs, and dismissed the action with costs in both Courts. Lord Trayner said the defendants pleaded that the pursuers had no title to sue, and that plea among others the Sheriff had repelled. The pursuers sued as an incorporated company, and if they were such the instance and title were not open to objection. The defendants further contended that the designation of the pursuers' company under the Companies' Act was void in respect that the pursuers' company or association was a trade union. The first question, therefore, was whether the pursuers' company was or was not a trade-union. A trade-union was defined by statute (39 and 40 Vic., cap. 22, section 16) to be any combination, permanent or temporary, between masters and masters, or for imposing restrictions on the conduct of any trade or business, whether said combination would or would not be deemed an unlawful combination by reason of some one or more of its purposes being in restraint of trade. If, therefore, the pursuers' company or combination imposed restrictions on the conduct of any trade or business it was a trade-union, although these restrictions were such as the law would compel the members thereof to observe. His Lordship was of the opinion that the pursuers' company was a combination falling within the statutory definition. By its Articles of Association (which formed a contract of co-partnery among the members) there was by article 42 imposed on its members a restriction as to the employment of certain servants, and by article 39 there was a restriction imposed as to the position of certain bottles, which were necessary articles for carrying on or conducting the trade of the members of the combination. By the by-law issued by the pursuers' company, which the whole of its members were bound to observe, and which by the Articles of Association the company was authorised to make, there were further restrictions, such as the prohibition of members exchanging bottles with any one not a member. Whether these restrictions were lawful or unlawful as in restraint of trade need not be considered. They were restrictive conditions on the conduct of trade, and therefore brought the pursuers' combination or company within the statutory definition of a trade-union. That being so, the registration of the pursuers' company under the Companies' Act was void. If the pursuers' company was not an incorporated company it could not sue in its descriptive name without the addition of the names of at least three of its members. The pursuers sued in their descriptive name, and the instance was radically defective. The other Judges concurred.

Medicine-stamp Acts.

A 2*d.* Box of Ointment.

At the St. Helen's Police Court on Friday, before Lieut.-Col. J. W. McTear (Chairman) and Alderman J. Massey, Maurice Evans Darby, of 21 Kirkland Street, St. Helen's, was summoned at the instance of the Inland Revenue authorities for unlawfully exposing for sale certain medicines liable to stamp-duty without having obtained a licence. He was further charged with unlawfully exposing for sale a certain medicine known as "Old Tomb's ointment," which was recommended for the prevention and cure and relief of complaints incident to the human body without having a proper stamped cover wrapper on the box.

Defendant pleaded not guilty.

Mr. B. Hawkins, of Somerset House, who appeared for the Inland Revenue authorities, stated that the Commissioners, as was customary, had offered the defendant certain terms nearly six months ago, and Darby promised to comply with them. He kept on asking for further time, and he was given abundant opportunities. However, the terms had not been accepted, and the authorities, in the interests of the trade, had issued summonses. Mr. Hawkins explained the Acts of Parliament under which the summonses were taken out, and proceeded to call evidence.

The Defendant: I have two very strong objections to lodge, and I hope that you will hear me before the case goes any further. The first is that the information is bad in law, inasmuch as the case was tried by the Revenue Commissioners some time ago, and they, having power to deal with it, fixed the penalty at 10*s.* My second objection is that the date on the summons is wrong. The inspector never visited my premises on such a date. Such a flimsy case ought never to have been brought into a court.

Mr. Hawkins explained that the date on the summons was wrong, but only by one day, and the defendant had been served with notice of the mistake. As regards his other objection, the defendant was entirely out of order.

The Defendant (loudly): I appeal to the Magistrates to sustain my objections.

The Chairman: Do keep quiet. You are out of order.

The Defendant: But I say that I am not.

The Chairman: Do not try and teach us the law.

The Defendant: This is persecution, not prosecution. You have no jurisdiction.

Thomas Clancy, of the Inland Revenue Office, stated that on January 14 last his attention was attracted to a card in the defendant's window.

The Chairman: Do you produce it?

Mr. Hawkins: No; but we have given the defendant notice to do so.

The Defendant: And I refuse to produce it. I have not got a lawyer to defend me, but I know that the English law says that a person need not say or do anything that would incriminate himself.

The witness, continuing, stated that he took a copy of the card, and it bore the following words:

> Sold here: Old Tomb's Ointment. For healing bad legs, gathered breasts, eczema, wet and dry scurvy, sore hands and face, boils, cuts, burns, bruises, and all wounds. Sole proprietor, M. E. Darby, 21 Kirkland Street, St. Helen's. Worth a king's ransom. Unfailing remedy for chilblains, &c.

After reading the card he went into the defendant's shop and asked for a box of Old Tomb's ointment as advertised in his window. He supplied him with it, and he paid defendant 2*d.* He examined the box, and found that there was no medicine-stamp on it. The box was labelled similarly to the one produced. He sent it to the Government laboratory, and at that time there was no licence for the sale of medicine in force for the defendant's premises. In the course of his official duty he became aware that the Board of Inland Revenue had offered the defendant certain terms, but he had not complied with them. The reason for the delay of the summons was because the defendant kept on asking for further time to comply with the offer.

Cross-examined by the defendant, witness stated that the defendant did ask him what he wanted the ointment for, and he might have told him several complaints. He referred the defendant to the card in the window, and asked him if it would cure all the complaints specified. The defendant continued his cross-examination for some considerable time, and ultimately the Chairman interfered with the remark that the Magistrates regarded his points as silly.

George Sleathe stated that, as Supervisor of Inland Revenue, he became acquainted with the Commissioners' offer to the defendant, and he called upon him several times to give him an opportunity of complying with the terms. He asked for time to pay, until at last he said he had not the means. He was given another opportunity after this, the Board informing him that they would give him until the end of June.

The Chairman: Between January 14 and the present time has he sold this ointment?

Witness: Yes, I believe so; but the card in his window is now worded differently. There is no reference to healing-properties.

The Chairman: What did the label on the box contain?

Witness: "Old Tomb's Ointment for chilblains, cuts, burns, bruises, and all wounds. Sole proprietor, M. E. Darby, 21 Kirkland Street, St. Helen's. Worth a king's ransom."

The defendant again contended that the case ought never to have been brought into court, and he regarded it as scandalous. The Commissioners had already fixed the penalty at 10*s*., and he maintained, according to common-sense, if not English law, that they should have taken civil action to recover that amount. He repeated fearlessly that it was not a case of prosecution, but persecution. He had a history which no man need be ashamed of, and, with a view of maintaining his wife and family, he had placed on the market an article which was of immense value to the public and which had won its way to the front.

The Chairman: Confine yourself to the case. We won't have you advertising your wares in this court.

The defendant, continuing, said that where there was no knowledge of the law there was no offence. If he had committed a technical offence, he apologised, and he would take care never to repeat the offence again. If they fined him his home would have to be broken up. He could quote instances where persons had been breaking the law, the same as they alleged he had, for thirty years, and they need go no further than St. Helen's market-ground to find proof of his statement. He was not guilty of a criminal offence, consequently he need not blush with shame. He argued that he thought it would have been unwise for him to take out a licence for "Old Tomb's Ointment," as it would then be classed as a patent medicine. He had a pedlar's licence, and paid 5*s*. a year for it. Therefore, he contended, he was not cheating the Revenue.

The Chairman: You ought to have paid the 10*s*. when requested by the Inland Revenue authorities.

Defendant: What if I had not got it?

The Chairman: Find it some way or other; or give up selling quack medicines.

Defendant: I am no quack. I have paid 5*s*. for a licence.

The Clerk: But that goes to the St. Helen's Corporation, and not to the Revenue.

Defendant: Perhaps that is the jealousy. (Laughter.)

The Chairman: You will be fined 1*l*. and costs in each case.

Sale of Food and Drugs Acts.

Pepper.

At Wigan, on July 17, the Leigh Co-operative Friendly Society were summoned for selling pepper adulterated with 10 per cent. of pepper husks. For the defence it was submitted that the pepper was warranted, and that the certificate from the county analyst was bad, inasmuch as the percentage was not fully stated. It was contended that the pepper was commercially pure. Analysts from Liverpool and Manchester gave evidence for the defence, but a fine of 1*l*. and 3*l*. 3*s*. was imposed. A case is to be stated.

Arsenic in Sweets.

At the Newport Borough Bench (Isle of Wight) last week, Mabel Harley, confectioner, was summoned for selling sweets adulterated with arsenic. The sweets complained of were known as "Musk Dessert" and were sold at 1*d*. per oz. A sample was analysed by the county analyst (Mr. Otto Hehner), who certified that they contained arsenic to the extent of $\frac{1}{300}$ gr. The sweets were pink and brown sugar tubes, and the arsenic was all in the brown tubes to the extent of at least $\frac{1}{700}$ gr. per lb. The arsenic was in the brown colouring, which consisted mainly of oxide of iron, but though the arsenic, combined as it was with the iron oxide, might not in that proportion be injurious to health, the sweets were, undoubtedly, highly objectionable. The arsenic was not intentionally introduced, but was a very common impurity in oxide of iron. This highly objectionable mineral colouring was used to make the sweets appear as if they were coated with chocolate. Mr. Ivens, who defended, urged that there was no case for conviction, pointing out that to get a grain of arsenic into the system a person would have to eat over a quarter of a ton of the sweets. The Bench, though declining to convict, remarked on the objectionable character of the coating of the sweets, and suggested that the attention of the manufacturer should be called to it.

Blaud's Pills or Iron Pills.

Parkes Drug-stores (Limited) were defendants in a case called before the North London Police Magistrate on July 17, the allegation of the Islington Borough Council, who prosecuted, being that the iron pills which they sold at their Holloway Road shop to one of the sanitary inspectors were largely deficient in the essential element of ferrous carbonate. Mr. A. M. Bramall prosecuted, and Mr. C. H. Kirby defended.

Mr. Bramall said this case was a little out of the common, because there was a label on the bottle, "These pills are not made according to the British Pharmacopœia."

Mr. Kirby said that Mr. Bramall need not go into the case now, because he was going to ask for an adjournment in order to send a sample of the pills for analysis at the Somerset House laboratory.

Mr. Bramall: But I want Somerset House to know that these pills were not sold as compounded from the British Pharmacopœia. You will see, however, that they are said to be prepared from Dr. Blaud's formula.

Mr. Fordham: Without saying they were from Blaud's formula, is the percentage of the essential element approximately correct?

Mr. Kirby: As the sample is going to Somerset House there is no necessity to say more now, but after we have the Somerset House certificate we shall have something to go upon.

Mr. Bramall: But, as I said, I want Somerset House to know that these pills were prepared from Dr. Blaud's formula, but not made according to the British Pharmacopœia.

Mr. Fordham: I will direct that they be asked the question, "What percentage of ferrous carbonate is contained in these pills," and then we can discuss the other points.

Mr. Bramall: We might as well identify the sample now.

Mr. Kirby: I will admit the purchase.

Mr. Fordham: It will be as well to have it on the notes of the court.

William Walter Ward, sanitary inspector to the Islington Borough Council, said he went to the defendants' shop at 804 Holloway Road on June 3 last. He asked for a bottle of iron pills. The assistant asked "Blaud's?" and he (witness) said, "Yes, they will do." The bottle was handed over, and 1*s*. 4*d*. paid.

Mr. Fordham: Blaud's is a recognised iron pill?

Mr. Bramall: Yes, he was a French chemist, and the inventor.

Mr. Fordham: There is no question about the covering of the pill in this case, I suppose?

Mr Bramall: No. The analyst has been careful to say this is so-and-so after being deprived of its coating.

Mr. Kirby: The analyst has mended his ways since he was here before. (Laughter.)

The witness Ward, continuing, said he divided the sample in the usual way, and took a third of it to the public analyst. The certificate was now produced.

Mr. Bramall: I do not know if I can ask him if these pills are prepared according to the French Pharmacopœia. Dr. Harris, our medical officer, has brought his copy, and perhaps I might ask if Blaud's formula is according to the French Pharmacopœia. If necessary I shall bring a witness from France. Dr. Blaud is dead; but we have unearthed his nephew, and if you like to have his evidence I will get him here.

Mr. Fordham: At the rehearing of the case I will grant you an adjournment, if necessary, to prove your case.

On the question of adjournment Mr. Kirby suggested a month, because (he said) of the long time taken by Somerset House to do their work. But Mr. Bramall said three weeks would be ample, and it would be all the better to have the case settled quickly because the pills were still being sold.

Mr. Fordham said it would be as well to clear it off before the vacation, and adjourned it until August 7.

Cream of Tartar.

At Malmesbury on July 21, Thomas Dykes of Brinkworth, Albert Adye and Sidney Adye, trading as Walker & Co., grocers, Malmesbury, and Edward Henry Lockstone, grocer, Malmesbury, were summoned for having sold cream of tartar adulterated with lead to the extent of ¾ gr. to the lb. Mr. Henry Bevir prosecuted for the Wilts County Council, and Mr. F. W. Beck (Neve, Beck & Kirby) defended.

Mr. Bevir said, in order to avoid misconception, that this prosecution was only in one sense aimed at defendants; it was also an attack on the wholesale traders supplying defendants. Prosecution desired to show that cream of tartar could be prepared without adulteration if care was used. Samuel Smith proved the purchase of the cream of tartar. He paid 5*d.* for one lot and ½*d.* less for another, in each case he purchased 4 oz.

Dr. Bernard Dyer, public analyst, said he found one sample contained 1 gr. of lead per lb., five samples contained ¾ gr. Leaden vats were used in the process of manufacturing cream of tartar, and it was from these the lead came. He based his report on the British Pharmacopœia, 1898.. He suggested that the use of glazed enamel pans was all that was necessary to avoid contamination. Dr. Tubb Thomas, medical officer for the county of Wilts, said cream of tartar should be reasonably free from lead, which was an extremely dangerous poison, especially when taken in small doses.

Dr. Arthur Pearson Luff, Home Office expert in poisons said the amount of lead found in these samples was decidedly injurious to health; he had known cases where $\frac{1}{100}$-gr. of lead taken in water per day had given rise to lead poisoning.

Mr. F. W. Beck for the defence argued that the article sold in this case was not a drug, seeing it was bought from a grocer, and consequently the British Pharmacopœia, which was the only standard relied upon by the prosecution, did not apply.

Mr. Bevir said there were not two standards for cream of tartar; what was asked for was well known and well defined in the British Pharmacopœia.

The Bench regarded the case as a test prosecution and came to the conclusion that the substance was a drug, and that the purchaser was prejudiced by the presence of lead. Each defendant was fined 5*l.*, and ten guineas costs each.

High Court Cases.

Aërated-water Bottles.

On July 18, in the Dublin Rolls Court, judgment was given in the cases of A. & R. Thwaites & Co. (Limited) *v.* McEvilly & Co., and Cantrell & Cochrane *v.* Murphy & Bradshaw, which occupied some days in hearing recently before the Master of the Rolls (see *C. & D.*, July 4, page 8). The plaintiffs, mineral-water manufacturers in Dublin, sought injunctions restraining defendants from selling or offering for sale aërated or mineral waters not of plaintiffs' manufacture in bottles embossed with their name. A number of actions by other firms against the defendants named depended on the result of these test-cases.

The Master of the Rolls, in giving judgment, said the difficulty in the case—and it was a somewhat difficult case—arose from the circumstances that there was no proof of actual intention to deceive purchasers or the public, and there was no proof of anyone being, in fact, deceived by the defendants' use of the plaintiffs' bottles, bearing their distinctive trade-marks embossed on the bottles. The defendants asserted the right to use the plaintiffs' bottles by reason of what they believed unfair and unreasonable treatment by the plaintiffs in declining to exchange bottles with them. The defendants said that if they refused to accept empty bottles, however branded, their customers would discontinue dealing with them, with the result that their trade would be destroyed. Mr. O'Brien, counsel for the defendants, sued this to show that his clients were driven to use any bottles they could get, not because of the brand, but because if they discriminated between the plaintiffs' trade-marked bottles and other bottles they would soon accumulate a stock of bottles which would be useless to them, and this was relied on as amounting to proof of innocence on the defendants' part. It was also relied on as part of the defence that the defendants placed their own label on the bottles, each label bearing a description of the contents and the defendants' name and address, and that anyone who read the label could not suppose that the contents were the manufacture of Thwaites & Co. But everyone did not read the labels. They were liable to fall off by accident, and, besides, any unprincipled person could remove them altogether without any great difficulty. Even if the label were not interfered with, the bottle could be so placed on a shelf or counter that the label would be at the back and so hidden, while the branded trade-mark of the plaintiffs would be exposed to the view of the customer. The labels used by the defendants were of the ordinary size and of no very special distinction of appearance, and there was no evidence that they were so used as to cover up the plaintiffs' name and trade-mark. Indeed, they could not be so used. The fact was that the defendants here had sold their own manufacture in bottles bearing in prominent shape the plaintiffs' name and trade-mark, and also bearing at the time of sale a label with the defendants' own name—that was to say, each bottle bore two trade descriptions, one true and the other untrue. What would happen if both were fabricated it was not for him to speculate. This practice had been persevered in after warning, after cautionary notices, and, in McEvilly's case, after prosecution in the Police Court, appeal to Quarter Sessions, and confirmation on a case stated for the Court for Crown Cases Reserved. The excuse suggested, rather than relied upon, was that in the hurry of business it would be impossible to examine the empties, and that bottles bearing plaintiffs' trade-mark would be accepted by the defendants. Even so, that would not justify the bottles being labelled by the defendants. But this was not so, for the bottles taken up from the customers were to some extent examined, and the most rudimentary examination would show that they bore the plaintiffs' trade-mark—indeed a blind man could tell that. Having quoted a number of decisions bearing upon the point at issue, his Lordship said he had come to the conclusion that the defendants had not shown that they had acted innocently within the meaning of the Statute, and as they had endeavoured to justify what they had done, and had stated they intended to continue their practice, there must, of course, be an injunction in each case, with costs. If there was any hardship in the law, the defendants had the remedy in their own hands, by simply refusing to receive any bottles bearing the plaintiffs' trade description.

Customs Acts.

Purchase of Smuggled Saccharin.

The hearing of the action by the Crown authorities against Robert James White, John George White, and John Frederick Child was resumed on Friday, July 17. The action was to recover penalties (5,428*l.*) under the Customs Acts for keeping, acquiring possession of, and being concerned in dealing with saccharin on which Customs duties had not been paid, and also with being concerned in the fraudulent evasion of Customs duties. The first hearing by Mr. Justice Lawrance and a special jury was reported in the *C. & D.* last week, page 108. On Friday Mr. J. F. Child in his evidence stated that he first met Mr. Ferminich in Grasse. He was a traveller for Messrs. Chuit, Naef & Co. In June, 1901, Firmenich called and told him he had about 6 cwt. of saccharin, which he had imported in anticipation of a duty being imposed, having several Scottish contracts to fulfil. With Mr. R. J. White's sanction witness agreed to buy at 23*s.* 6*d.*, with a return of 5 per cent. as profit to the London Essence Company. It was agreed to order the saccharin as resorcin. Witness corroborated previous evidence as to delivery. The goods were invoiced as bought from Chuit, Naef & Co. When the confidential officer of the Customs (Mr. Starkey) called witness gave him every information when he told him that he had not come from the Saccharin Corporation, but because the saccharin was smuggled. That was the first he had heard of it. He went to Kop's Brewery with Mr. Starkey and had all the saccharin brought out, and provided him with vans to take it to the King's warehouse.

Sir Edward Clarke, for the defendants, said the amount was of secondary importance in comparison with the good name of the defendants. They were charged with what was really a criminal offence, and each defendant was entitled to have his case considered separately, and with regard to each one the jury would have to be satisfied that he concealed the goods with intent to defraud the Crown, failing which he was entitled to be relieved from liability. Mr. John White had taken no active part in the business for years, and his brother knew nothing of the matter from the time he told Mr. Child to carry out the transaction, and there was no ground for suggesting that he knew or suspected the goods to have been smuggled. With regard to Mr. Child, he knew Mr. Firmenich as the representative of the Geneva firm and had no reason to suspect his story that the goods were imported before the duty was imposed.

The Solicitor-General (Sir E. Carson), replying for the Crown, admitted the importance of the case, but said it was equally important for the Crown and the public as it was for the defendants. There was, it was true, no evidence against Mr. John White, but he was a partner in the firm and was liable if the other partner had defrauded the revenue. The Geneva firm was a firm of smugglers, and an extraordinary feature in the case was that this was the first and only transaction with the London Essence Company in saccharin, though Kop's Brewery dealt in it somewhat largely. It was clear that the two defendants went outside their contract with the Saccharin Corporation to obtain at a low price goods which they knew must be smuggled.

The jury found Mr. J. G. White not guilty and the other two defendants guilty.

Sir E. Clarke said the value of the saccharin was agreed at 40*s*. per lb., and the Attorney-General said the amount of the penalties would be 4,176*l*., to be levied from either or both of the defendants who had been found guilty. Judgment accordingly.

Bankruptcy Report.

Re GEORGE SAUNDERS, High Street, Bexhill, Sussex, Chemist and Druggist.—The public examination was held at Hastings last week. In answer to questions by the Official Receiver, debtor gave a history of his failure as already published in THE CHEMIST AND DRUGGIST of July 4 (page 7), and the examination was closed.

Deed of Arrangement.

Walker, Francis, 12 Beacon Lane, Everton, Liverpool chemist. Trustee, Wm. McConnal, 22 Lord Street, Liverpool, accountant. Dated, July 10; filed, July 16. Liabilities unsecured, 675*l*. 9*s*. 2*d*.; estimated net assets, 225*l*. The following are creditors:

	£	*s*.	*d*.
Adair, Mrs. J., Liverpool	103	0	0
Ayrton & Saunders, Liverpool	15	0	0
Batson, R., Liverpool	25	0	0
Clay, Dod & Co., Liverpool	42	0	0
Evans, Sons & Co., Liverpool	100	0	0
Jackson & Sons, Liverpool	21	0	0
Mansergh, R., Liverpool	135	0	0
Rowand & Co., Liverpool	18	0	0
Sumner & Co., Liverpool...	57	0	0
Thompson, J., & Co., Liverpool	53	0	0
Willows, Francis & Co., London... ...	10	0	0

FRANCE, the United Kingdom, and Italy shipped 540 cases of drugs and medicines to Beirut during 1902, 1,350 packages of caustic soda, alum, and copperas were also sent last year, principally from the United Kingdom.

METROPOLITAN COLLEGE OF PHARMACY.—The summer sessional examination-results are as follows: Silver medallist, Cyril Yeoman. Bronze medals in practical chemistry, Charles Abel Davies; chemistry, William Beesley; pharmacy, Robert Valentine Sweetman; botany, Robert Valentine Sweetman; materia medica, Edward Chalmers; dispensing, Joseph Luther Hirst.

New Companies & Company News.

ANNALS OF BOTANY COMPANY.—Registered July 13, with ten members, each liable for 1*l*. in the event of winding-up. Objects: To print, publish, sell, and distribute the publication known as the *Annals of Botany*, and other books, reports, magazines, and periodicals relating to botany, &c. The word "limited" is omitted from the title by licence of the Board of Trade.

CASTLE SOAP COMPANY (LIMITED).—Capital 5,000*l*., in 1*l*. shares (2,400 preference). Objects: To acquire the business carried on by W. Bond, A. W. Bishop, and J. Tyler at New Street, Cambridge, as the Castle Soap Company, and to carry on the business of manufacturers of soaps, candles, and chemicals, &c. No initial public issue. Registered without articles of association. The first directors are A. W. Bishop, J. Tyler, and H. E. Verrinder. Registered office, New Street, Cambridge.

UNIVERSAL BOTTLE-ENVELOPE COMPANY (LIMITED).—Capital 50,000*l*., in 1*l*. shares. Objects: To acquire the English patent known as "Gamper's Improved Corrugated Bottle-envelope," and to carry on the business of manufacturers of bottle envelopes and covers, &c. Minimum cash subscription, one-third of the shares offered to the public. The first directors are C. D. K. Welch, Sir W. E. Miller, Bart., and R. P. Culley. Qualification, 250*l*. shares or stock. Remuneration, 100*l*. each per annum, and 50*l*. extra for the chairman.

BARR'S CHEMICAL COMPANY (LIMITED).—Capital 5,000*l*., in 1*l*. shares. Objects: To acquire and carry on the business of manufacturing chemists, oil and soap merchants, wholesale druggists, grocers, drapers, and general merchants, carried on at Bellshill, Lanarkshire, under the style of William Barr & Co. (Limited). The first subscribers are: J. McKay, Carnbrae House Bellshill, Lanarkshire, manufacturing chemist; Mrs. C. Barr, Carnbrae House, Bellshill, Lanarkshire; J. Fulton, Scott's Lane, Bellshill, Lanarkshire, traveller; J. Murdoch, Braidfaulds, Tollcross, Lanarkshire, printer; A. Rosenberg, 28 Lily Bank Gardens, Glasgow, merchant; R. Hunter, 8 Royal Crescent, Crosshill, Glasgow, merchant; J. Mark, 45 Cecil Street, Hillshead, Glasgow, solicitor; and J. Macdonald, 65 West Regent Street, Glasgow, C.E. The first directors are to be afterwards appointed. Qualification, 50 shares. Remuneration as fixed by the company. Registered office, St. Bride's Place, Bellshill, Lanarkshire.

WARRINGTON BORATE COMPANY (LIMITED).—Capital 5,000*l*., in 1*l*. shares. Objects: To carry on the business of manufacturers of borate of soda, borax, boracic acid, sulphate of soda, salt, nitrate of potash, carbonate of lime, and other chemicals, minerals and substances, &c. The first subscribers are: E. L. Fleming, 9 Alexandra Terrace, Lower Walton, Warrington, borate of soda manufacturer; J. Dodds, Penketh House, near Warrington, accountant; W. Parker, 21 Walker Street, Warrington, clerk; A. E. Boardman, 78 Manchester Road, Warrington, engineer; C. E. Parker, Penketh Lodge, near Warrington, tanner; F. J. Crossfield, Todbusk, Ulverston, timber-importer; and H. P. Densham, Orford House, Warrington, tanner. No initial public issue. The subscribers are to appoint the first directors. Qualification, 250 shares. Remuneration as fixed by the company.

BRITON FERRY CHEMICAL AND MANURE COMPANY (LIMITED).—The directors have declared an interim dividend of 6*d*. per share.

JOHN OAKEY & SONS (LIMITED).—The directors have declared an interim dividend on the ordinary shares at the rate of 10 per cent. per annum.

W. B. FORDHAM & SONS (LIMITED).—The directors have declared an interim dividend at the rate of 6 per cent. per annum, free of income-tax, for the six months ended June 30.

APOLLINARIS & JOHANNIS (LIMITED).—The sixth ordinary general meeting of this company was held at the Holborn Restaurant on July 16, Mr. Frederick Gordon (chairman of the company) presiding. The report and balance-sheet, particulars of which were given in our issue of July 11 (page 63), were unanimously adopted. Viscount Duncannon was re-elected a director. The auditors were likewise re-elected, and the staff were thanked.

PHOTOGRAPHIC ASSOCIATION (LIMITED).—Mr. Justice Swinfen Eady, in the Chancery Division on July 17 had before him a motion to appoint a receiver and manager in the debenture-holders' action of Richardson *v*. the Photographic Association. The plaintiffs held 1,550 of the total issue of 3,000 first debentures, and a Mr. Connop, who supported the application, held a further 700. He also held the whole of an issue of 3,000*l*. second debentures. His Lordship appointed Mr. Hayes receiver and manager for a week.

Medical Gleanings.

GLYCOSURIA.

PROSPEROUS City men who eat too much and drink too much and take too little exercise frequently suffer from glycosuria. In these cases Dr. J. McNamara has found that thyroid gland causes the disappearance of the sugar from the urine. The efficient dose varies with each case. As a rule, two B. W. & Co. tabloids (gr. 1½) three times daily suffice, but after a time this dose may have to be increased to two of the large tabloids (gr. 5) three times daily.

SODIUM SALICYLATE IN MALARIA.

MR. A. D. E. KENNARD, M.R.C.S., L.R.C.P., of Hampton Wick, communicates to the *Lancet* notes of three cases of malarial fever which he has treated successfully with sodium salicylate in 20-gr. doses. He finds that it reduces the temperature as quickly as quinine, if not more quickly, and it is of the greatest value in relieving the acute pain in the limbs which patients suffer from in malarial fever. It acts very quickly, and after a few doses all the pain passes away. As the salicylate is not used in India for this purpose, it deserves a trial.

MEDICAL TREATMENT OF OBESITY.

DR. N. E. YORKE-DAVIES says in the *British Medical Journal* his experience is that the only way to reduce obesity with safety is by means of diet. It is possible to reduce abnormal weight to proper weight with most absolute improvement in health and condition, and drugs in the treatment of obesity are worse than useless, especially iodide of potassium. This applies equally to purgatives and all quack remedies which are advertised for the purpose. He sees the evil effects of their use constantly.

BLUE LIGHT IN LUPUS.

DR. GUSTAV KAISER, professor of dermatology in the University of Vienna, has tried with decided success the influence of blue rays in the treatment of lupus, and the *Medical Press* (page 59) gives photographs which demonstrate how admirable the treatment is, so far as the face is concerned. He concludes that blue rays stimulate the metamorphosis of the body; that refracted rays are more efficacious; that the chemical rays are the principal therapeutic agent; that blue light has results in direct proportion to the distance and intensity of the source; and that these penetrate vascular tissue so easily as to operate effectually on the deeper structures, which is proved by the calming and anæsthetising results obtained from their use.

RINGWORM OF THE SCALP.

PROFESSOR HALLOPEAU recommends the following treatment: Wash the head every morning with soap and water; remove with pincers the broken hairs; apply blistering-fluid once a week; and rub the whole head morning and evening where the patches are numerous with—

Glycerin	℥j.
Oil of turpentine	ʒij.
Camphor	℥ij.
Proof spirit	℥x.

M.

The blistering-fluid cannot be employed in conjunction with this. Apply every morning the following ointment:

Iodine	gr. x.
Vaseline	℥iss.

M.

CHLOROFORM-INVESTIGATION.

TWO years ago the British Medical Association appointed a special committee to investigate the methods of quantitatively determining the presence of chloroform in the air and in the living body. Professor Dunstan, F.R.S., and Mr. A. Vernon Harcourt, F.R.S., are members of the committee. The second report of the committee's work was published in the *Journal* of the Association on July 18. It comprises two papers by Mr. Harcourt, two by Dr. Dudley W. Buxton on chloroform-inhalers, one by Mr. Walter Tyrell on Mr. Harcourt's inhaler, and one on the dosage of the mammalian heart by chloroform. The last is by Professor C. S. Sherrington, F.R.S., and Mr. S. C. M. Sowton. The papers are too long for anything like full reference; but it may be noted that the committee insists upon the absolute necessity of dosage in the case of chloroform, and demands an apparatus which shall enable the administrator to maintain the dose within such limits as will, on the one hand, give an adequate anæsthesia, and, on the other, not endanger life. Safety is held to be in the main a question of dosage, by which the committee does not mean any quantity of the drug, but its percentage-mixture with air. Even a very small quantity will kill when given in a concentrated form, while a comparatively large amount is absolutely safe if presented in a vapour below 2 per cent. The experts state that while for most patients 2 per cent. or less will be adequate to induce anæsthesia, 1 per cent. or less will maintain it.

TREATMENT OF URTICARIA.

THE two remedies Dr. Percy Newell (Bexhill) finds most useful are sodium phosphate in ʒj. doses three times daily, or calcium chloride gr. x. three times a day; externally as an adjunct ung. resinol relieves the pruritus. The late Mr. Startin recommended quinine with an alkali, and it is sometimes useful. The drug can be given in pill 1 gr., with an alkaline mixture—for example:

Magnes. sulph.	ʒiij.
Sodii bicarb.	ʒij.
Tr. gent. co.	ʒij.
Aquæ menth. pip. ad	℥vj.

M.

Sig.: ℥ss. ter in die, sumend. c. pil. j.

Dr. Norman Meachen says the internal administration of suprarenal extract, in 5-gr. tabloids, three times a day, is often of service. Bearing in mind the possibility of some absorption of a toxin from the gastro-intestinal tract, it is of the utmost importance to secure free daily evacuation of the bowels. For this purpose the use of an aperient water, such as Carlsbad or Hunyadi János, may be recommended.—*Brit. Med. Journ.*

HAY-FEVER ANTITOXIN.

SIR FELIX SEMON'S opinion of Dr. Dunbar's antitoxin as an efficient remedy in hay-fever is confirmed. He communicates another paper to the *British Medical Journal* on the subject (July 18, page 123), and describes cases which have benefited. The following observations on the remedy are of special interest to dispensing chemists:

> The ready-made preparation, to which the name of "pollantin" has been given, is sent out by the manufacturers in a small case containing two wooden boxes, one of which encloses a phial with the serum and the other an empty glass provided with a drop-pipette, with directions. The phial containing the serum is closed by a cork, and Sir Felix expresses an earnest hope that the manufacturers may see their way to provide better corks. As it is, he has found that in the majority of cases the cork, which usually is unnecessarily deeply rammed down into the phial, breaks off, however carefully one may attempt to remove it, and that endeavours to subsequently extract the remaining larger part of the cork often result in breakage of the upper part of the tube. Seeing the very high price of the remedy—the apparatus above described costs 10*s.*—it might surely be expected that only the best sort of cork (or, better still, rubber plugs) should be used, or that some more commodious and less fragile form of preserving the serum should be devised. Furthermore, the drop-pipette is rather short when the rubber cap is applied for the sucking up every drop of the precious fluid, a quantity of which is thus apt to be lost each time the remedy is used. Again, the glass bottles not rarely stick fast in their wooden enclosures and cannot be removed. Altogether, the technical question is far from having been solved in an ideal manner.

Sir Felix adds that in several of his cases instillation of one drop of serum into each eye and two drops into each nostril had the effect of warding off an attack which otherwise, according to the considerable experience of the patients, would have almost certainly occurred for a period of several hours. In two of his cases this effect was so marked that auto-suggestion seemed to be practically out of the question. Unfortunately, however, even in these cases, this happy effect did not invariably occur, the remedy failing, for some unexplained reason, on individual occasions.

FAIR EXCHANGE.—"Can you change a sovereign?" asked Cadley. "Certainly," replied the chemist, courteously; "how'll you have it—in quinine pills or cough-drops?"

Reviews.

Proceedings of the American Pharmaceutical Association. Vol. 50.

HAD this Association determined to institute a permanent memorial of the semi-centennial of its foundation, celebrated at Philadelphia last year, it could not have had anything better than this sumptuous volume which lies before us. There are in it 1,244 pages of closely printed matter, and an Appendix consisting of 218 portraits of past and present officers of the Association. More than half of the volume—viz., 652 pages—is devoted to a report of the proceedings in Philadelphia, and from page 657 to page 1090 is the report on the progress of pharmacy during the year which ended on June 30, 1902, by Mr. C. Lewis Diehl. The activity of our American *confrères* when in session is admirably illustrated by the first part of the volume. The reports bear all the evidence that the meetings are splendidly engineered, and the reporting is the cleverest possible, for as one who was not there reads the pages, a feeling of actuality is engendered that is the best praise a reporter can wish for. We congratulate the Association on its activity, as exemplified by the volume.

The Pocket Therapist: a Dictionary of Disease and its Treatment. By THOMAS STRETCH DOWSE, M.D. 3rd edition. 16mo. Pp. iv + 411. Bristol, 1903: John Wright & Co. 6*s.* 6*d.* net.

THIS is a much more compact book than the number of pages indicates, but, though compact, it contains an astonishing amount of matter, and so well put together that any physician in doubt can read up a subject in the time his carriage takes him from one patient to another. The notes on treatment are very suggestive, and include numerous good prescriptions. Here, for example, is a draught for *delirium tremens*:

℞ Liq. opii sedat. (Battley)	♏xl.
Liq. cinch. (Battley)	♏xxx.
Aquæ ad	℥ij.

M. ft. haust.

To be given with 6 oz. of brandy beaten up with two eggs.

This acts with marvellous effect in very many cases, Dr. Dowse finds. Again, in ordinary headache with slight heart-depression, such as is common in hot, sultry weather, the following mixture is good and original:

℞ Lithiæ citrat.	gr. xl.
Spt. ammon. arom.	ʒiv.
Caffeinæ	gr. viij.
Syr. aurantii	℥j.
Aquæ chloroformi ad	℥viij.

M. ft. mist.

℥j. may be taken three times a day, or every hour until the pain ceases.

This edition of the book is larger than the last, and it appears to have been carefully revised.

Foods: Their Composition and Analysis. By A. WYNTER BLYTH, M.R.C.S., &c., and M. WYNTER BLYTH, B.A., B.Sc., &c. Fifth edition. Demy 8vo. Pp. xxvi + 616. 25*s.* London: Charles Griffin & Co. (Limited).

THE pages of this well-known work have been enlarged from 7¼ × 5 inches to 8¾ × 6 inches, and the author has been assisted by his son (a Cambridge man) in the revision. In the circumstances one would have expected that the opportunity would have been taken to thoroughly revise the book, and especially to make it reflect the more important observations which have been made since the last edition. New type is generally considered to be a good opportunity for revising the old and incorporating the new. On comparing this fifth with the third edition (1888) we have been disappointed to note how inadequately the authors have revised the work. There is new matter, undoubtedly, especially a section on the detection of arsenic in beer, but, taking the book as a whole, it is a reprint in which many of the errors of previous editions are repeated. A few examples may be cited to justify these remarks:

Page 24.—The paragraph on the amendment of the Sale of Food and Drugs Act, 1875, is exactly the same as in the third edition. Nothing is said about the 1899 Act.

Page 33.—"The term 'drug' to include every medicine for external or internal use, and Section 26 of the 1899 Act expressly extended the definition to flavouring-matters and condiments." This illustrates well the careless revision. It is "food" that flavouring-matters and condiments are included in.

Page 60.—Estimation of colouring-matters. Lovibond's tintometer is not mentioned.

Page 480.—The article on lemon-juice and lime-juice is the same as in 1888. Its value may be judged by two quotations: "The British Pharmacopœia directs that lemon-juice should have a sp. gr. 1·039 and should contain 32·5 gr. of citric acid per oz." Compare with page 316 of the British Pharmacopœia. "The juice is expressed in England and also in Sicily, where the method of preparation is to mix 1 oz. of brandy with 10 oz. of the juice, and over the surface of the liquid to pour a layer of olive oil." Mr. Allen's figures, which are quoted immediately after this extraordinary statement, might have suggested some inquiry to the authors.

These examples could be multiplied, and, on the contrary examples could also be given to show where the authors have made valuable improvements on the work; but the new edition does not justify the statement on the title-page "Thoroughly revised, enlarged, and re-written."

The Business Encyclopædia and Legal Adviser. Vol. IV. (Lie-Pri). By W. S. M. KNIGHT, Barrister-at-law. 9½ × 7. Pp. 344. 7*s.* 6*d.* Caxton Publishing Company.

THE latest volume of this invaluable book remains at the high-water mark in production and interest reached by its trio of predecessors. Beginning with a treatise on "Lien," the intricacies of "Life Assurance" are exhaustively set forth, and then we pass on to the absorbing subject of "Medicine Stamps and Licences." What the careful reader of THE CHEMIST AND DRUGGIST does not know about this subject is not worth knowing, and even Mr. Knight has little new to tell. He gives a succinct *résumé* of the history and scope of Medicine-stamp Acts. Dealing with "patent" medicines, properly so-called, he says:

> Even though the Act provides for cases where the article is protected by letters-patent, it is yet a theoretical principle of patent law that pharmaceutical preparations are not good subject-matter for a valid patent. But notwithstanding this principle, it would seem that a patent has been granted for a medicine within the last few years.

Referring to the vending of secret and proprietary remedies, it is interesting to note the following:

> Only a registered chemist can legally sell merely proprietary and secret remedies—so-called patent medicines which contain poison; but apparently anyone can deal in medicines actually protected by letters-patent even if poison is an ingredient in those medicines.

As showing the up-to-date value of the book, we note that the Glyn-Jones decision, although not specifically mentioned, has been carefully noted, for a paragraph at the end states that "exemption [from duty] also extends to known and approved medicinal mixtures and compounds prepared or sold by registered medical practitioners and chemists, so long as the facts of the preparation or sale do not come within the circumstances set out above." The "circumstances" alluded to are, of course, the maker or vendor having or claiming "an occult secret," and so on. An explanation of the Merchandise-marks Acts occupies four pages, and the arguments for and against the metric system are given together with tables of equivalents. The history of the Patent Law and instructions for taking out patents are set forth in detail, while judgments on debated points in that intricate law are touched upon. Another interesting treatise in the volume under consideration is that on "Poisons." The restrictions on the retailing of poisons are briefly and accurately stated. The Pharmacy Act requirements are explained, and the findings in historic cases taken by the Pharmaceutical Society to settle disputed points are set out. The provisions of the Arsenic Act of 1851 are also tabulated, and an abstract of the report of the Poisons Committee is given. In this connection pharmacists will be gratified to note that, while the evidence is given in brief, and the recommendations of the committee are printed in seven lines, the Minority Report of Mr. Walter Hills is given practically in full. Coloured illustrations of the coats-of-arms of towns appear as a frontispiece to this volume, which also has numerous pictures of various provincial cities and of successful business men.

Chemists' Advertising.

By Adeps Adeptis.

The general remark that on setting out to advertise it will be a good plan to bear in mind just what advertising is useful for, sounds redundant. Yet the practice and proposals of advertisers show that this essential is only too often lost sight of. Some examples published in The Chemist and Druggist of March 14 illustrated the fact in black and white. Let us therefore have the patience to consider this apparently obvious question. The purpose of advertising is to create business. There is no such thing as artistic advertising, there is no such thing as clever advertising, or smart advertising, or up-to-date advertising, which loses sight of this fact. A moment's consideration must show that mere artistry, cleverness, and smartness, and the quality of being up-to-date, are utterly and entirely irrelevant—useless, and worse than useless—if they fail to accomplish just one thing—to bring money to the shop. Whether the object is to promote the sale of some speciality, or to increase the general business-flow of the establishment, makes not a bit of difference. If the advertising and printing which you pay for in hard cash do not bring hard cash back in exchange, they are neither clever, artistic, nor smart, nor relevant, and their up-to-dateness is pure waste. The large advertisers in the daily, weekly, and monthly Press do not advertise in order to air their wit, nor to demonstrate their up-to-dateness. They are out for the cash. In our degree we must advertise with the same objects, if we are going to do any good to a chemist's shop by advertising and printing.

Undoubtedly the chemist-advertiser supposes himself in every instance to be starting out to make money by the practice of advertising. His success will depend, more than anything else, upon the degree to which he keeps the fact before him while he works. In the Winter Number of The Chemist and Druggist, and subsequently, examples were printed of advertisements issued, or intended to be issued, by chemists. How many of those who compiled them really kept a vital and active appreciation of the sole purpose of advertising before their minds? How many of those we did not print did so?

It will be replied, "But you are criticising the efforts of amateurs as if they were experts. You expect men, whose business is the compounding and selection of drugs, to do the work of men whose business is the compounding and selection of words. You cannot expect a casual advertiser to do the work as well as a professional advertiser."

What I want more than anything else to impress upon readers of this journal is that there is no such thing as "expert" advertising apart from knowledge of the goods advertised. No other conceivable thing is so important to the making of good advertisements as this knowledge; and a chemist is not in the nature of things worse qualified to prepare chemist's-shop advertising than a professional advertisement-writer, but, on the contrary, better qualified. A single moment's reflection will prove what I say. Suppose for a moment that a man with a cough wanted to be helped to the choice of a cough-mixture. Who could guide him better—who could tell him more clearly and forcibly what was good for him—a chemist, or an advertising expert? There is only only one possible answer—the chemist. Let a customer stand at the counter and ask advice on this point—ask not merely what is best, but why it is best; and there is not a chemist in the length and breadth of the land that could not answer him with a clearness, intelligence, and force which no advertising expert who ever set pen to paper (unless he was a chemist himself, or a doctor) could for an instant expect to rival. It stands to reason, then, that the best cough-mixture advertisement should be written by a pharmacist. As an advertisement to use for a cough-mixture I would rather have a simple shorthand note of what the average country chemist would say to a customer who asked him the question, "What sort of cough-mixture do you think best adapted for an ordinary cough?" than all the "expert" cough-mixture announcements ever penned.

There is the fact. Ask a chemist for an opinion by word of mouth, and no one can state it more clearly and tersely and intelligently. But ask a chemist to write an advertisement embodying that opinion, and immediately he begins to flounder in oceans of verbiage and irrelevancy and utter inadequateness. The pen paralyses him. His old terse, clear-cut English deserts him. He wanders from the point, labours what is of no importance, omits what is essential, wearies the reader beyond endurance, convinces no one. Here is a golden rule for every chemist who wishes to write advertisements. Just watch yourself while you talk about the goods you want to advertise, and when you set out to write do not write as you imagine authors and journalists and advertising experts to write, but write as you talk, and you will not go far wrong.

Let me give a concrete example. Suppose a customer came into the shop and addressed you—the average reader of The Chemist and Druggist—somewhat thus:

"I say, Mr. Reader, I fancy I have something wrong with my liver. What's the liver for?"

"H'm, yes. I shouldn't wonder if you have. Your eyes are a little yellow in the white part, and your skin isn't as clear as it might be. Do you feel heavy and sleepy?"

"Yes; I do."

"Low-spirited and depressed aren't you?"

"Shocking! I have tried a pill, and that makes me better for a little while; but the main trouble continues."

"Yes. You were right. Your liver *is* out of order. What is troubling you is the fatty portions of your food. When the liver is attending to business it disposes of these—separates them from the blood. Then, if the liver is working well, they get, as it were, burned up, in the lungs, and keep you warm. That is why 'a bad liver make you shiver.' That is what causes 'gooseflesh' all up your arms or legs, now and again. This same fatty matter is the cause of the eructations and biliousness you suffer from, too."

"Well, what do you advise me to take?"

"Exercise, for one thing. But your liver must be stimulated a little. I can give you some pills that will do that. Keep yourself warm, and get out of doors all you can. You'll soon be all right again."

Anyone who heard this conversation would be interested in it. Any man who can talk like that can write a good liver-medicine advertisement, if he will only go the right way about it. The right way is to write very much as one would talk. But when the average chemist sits down to write a liver-medicine advertisement he doesn't do this. He racks his brains for all the most tiresome, involved, indirect phrases he can think of. The following, submitted by a reader of The Chemist and Druggist, is not at all an extreme example—on the contrary, as chemists' advertisements go, it is rather a good one. But just compare the way this is written with the way the author could, I am convinced, *talk* about the liver, and the faults of it will be at once self-evident:

FUNCTIONS OF THE LIVER.

The particular function which the liver performs and the important part it plays in the maintenance of a high standard of health, may not be generally understood by the average individual, but almost everyone when oppressed by lassitude and loss of energy for which there is no apparent cause feels instinctively that the liver is out of order; and so frequently is this organ associated with the common ailments of everyday life, that in most cases the supposition is correct. The liver, when in a state of healthy activity, separates hydrocarbons from the blood, these being consumed in the process of respiration, but if this function be depressed the bile accumulates, distends the vessels, and either traverses them and passes into the blood, or regurgitates into the stomach and produces the many varieties of distressing symptoms with which most people are so familiar.

Those who are subject to derangement of the liver would do well to watch for the symptoms described above, and immediately on their appearance, even in the slightest degree, a dose of Sweedle's liver-pills should be taken according to the directions.

Prepared only by—

Sweedle, chemist, Extown.

The first sentence here contains eighty words, fully half of which are employed in stating the fact that the reader probably needs information. If the information were not needed there would be no object in printing it at all. What does the author mean by saying that the sufferer "feels instinctively that the liver is out of order"? There is no such thing as instinct in the matter. If a man thinks it is the liver that troubles him, it is because he has at some time or another been *told* so. "The liver in a state of healthy activity separates hydrocarbons from the blood," &c. Tut, tut! Who knows what hydrocarbons are, or what they are doing in the blood? Not the average newspaper reader.

An advertisement isn't written for scientific people: it is written for the man in the street. The author of this advertisement, confronted with a customer, would not prate about hydrocarbons in the blood. He would say, "Yes. You've got an overflow of bile." An advertisement that is to sell goods must not be filled up with such language as we have here. It must be straight, heart-to-heart talk, simple, terse, relevant, convincing, and not too clever for the average man to understand and appreciate.

But this is not a fit example to put in the pillory. Translate it (as I have purposely done in the suppositious conversation printed ahead of it) into everyday language, and it becomes a pretty good advertisement.

Here is a much more painful case. It has no headline, but starts out at once thus:—

> Chilblains are too familiar to most of us to need description; but, as they are a source of great annoyance and may assume a chronic nature, occasioning much discomfort during the major part of the ensuing summer, it will be interesting and instructive to know how they originate and how they may be most quickly and certainly cured.
>
> Chilblains are the result of a feeble circulation of the blood; accordingly they make their appearance on the fingers and toes of those who become chilled in offices, &c., where, during the long, cold days, the victims are unable to move about freely and so keep their extremities sufficiently warm.
>
> To warm your hands and feet at a fire would only make the chilblains worse. There is only one way to treat them properly. Whenever the chilblains appear, consider the proverb which says, "A stitch in time saves nine," call at 37 Quickcure Road, and ask for a bottle of Jamieson's chilblain-liniment. When you get home read the directions carefully and then apply the liniment. In two or three days the chilblains will have vanished. Now, you will say, why is it that this liniment is so effective while others I have tried have done me no good?
>
> The reason is this. Jamieson's chilblain-liniment is not a liniment put up to fetch a big profit, but is one which is based on sound scientific principles; and, although recommended by many leading physicians in town, it will not require extraneous recommendation after a fair personal trial.
>
> Jamieson's chilblain-liniment. Price 1s. per bottle.

Now, this is a very favourable example of how *not* to write a chemist's advertisement. It starts out, as usual, with a sentence that is much too long—fifty-eight words. Long sentences are the pitfall of the practised writer; but they are a terror in the hands of the amateur. The sentence is worse than clumsy: it is useless. And whatever is useless in advertising is wasteful and directly injurious. It does not only want space and printing (which cost money); but it wastes what is worse—the reader's attention. If you consume his time in telling him that what he is suffering from is too common to need description, that his chilblains will get worse if he warms them at the fire, that a stitch in time saves nine, and that your medicine does not yield a big profit to you, when will he spare time to pay attention to your recommendation of the One Remedy?

All that is essential in this advertisement could be expressed in the few words which follow, and with much more likelihood of practical result in the form of sales:

**Chil-
blains.**

Is it a Chilbrain, that little red and purple spot on your toe or finger?

It itches so that you long to scratch it: but you dare not. It is too tender. You can get ease by rubbing it: but beware! The skin may break, and you will have an ugly wound.

**Instant
relief**

Can be had by painting the Chilblain—broken or unbroken—with

**Jamieson's
Chilblain
Liniment.**

In three days the spot will be healed; but the itching and soreness will have disappeared at once.

Price 1s. 1½d. Jamieson, Chemist, South Street.

The above is far from being cited as a perfect example. Indeed, it may be questioned whether chilblain-liniment is a proper subject for argumentative advertising at all. Perhaps a straight-out display would suit the subject better, as thus:

For Chilblains

Broken or unbroken
Recent or chronic.

Jamieson's Liniment

At once stops itching
Cures in three days.

1s. 1½d. at Jameson's Pharmacy, South Street.

But this is a question of taste.

Maxims for the chemist who wishes to write advertisements are these:

Avoid long words and long sentences.
Write as nearly as possible in the same way as you talk.
Cut out every superfluous word you can discover.

It will be noticed that in the two examples quoted plain types and unornamented settings have been used, and that there has been no effort to concentrate attention upon the name and address of the advertiser. The latter, in the case of a remedy directly recommended for a specific complaint, are not of the first importance, though in some cases there may be other reasons for "displaying" them. But this is a question of type-setting, and type-setting in connection with advertisements is a subject which demands a special article all to itself.

Indian Cardamoms.

Some time ago the United Planters' Association of Southern India addressed to the Director-General of Statistics certain inquiries regarding cardamom-cultivation in South India. The Association desired to know what was the area under cardamoms, what the yield per acre was, and also asked for information regarding the exports and imports of the spice. The Director-General referred the Association to the Madras Government, stating that separate statistics relating to the points regarding which inquiry was made were not furnished to the department. In response to the Association's request the local Government has furnished it with much interesting information acquired through the Board of Revenue, showing the state of cardamom cultivation and trade. In Madura in the taluks of Dindigul, Palni, Periyakulum, and Kodaikanal there were 3,714 acres under cardamoms in 1902, which produced a total yield of 649,281 lbs., the average yield per acre being 175·18 lbs. The yield varies according to the nature of the soil, the elevation at which the plants are grown, and the existence or absence of shade trees. Kodaikanal planters secured the best results. The outturn is said not to be altogether reliable, and local officers seem to have had some difficulty in discriminating between estimates of yield in green and dry cardamom. In Malabar, where no systematic cultivation is carried on, and where the plant grows spontaneously in some parts, the area under cardamom measured 1,586 acres, yielding 24,496 lbs., averaging 15·445 lbs. to the acre. In South Canara the estimate was 1,260 acres, yielding 68·898 lbs., averaging 54·626 lbs. Coondapoor taluk had the highest yield per acre—700 lbs.—though only 8 acres were planted, at Hanner Magane. The high yield is due to the fact that cardamoms are regularly cultivated there. The total acreage was 6,560, with a total yield of 742,605 lbs., an average yield per acre of 113·202 lbs. Madras exports cardamoms from the districts of Madras, South Arcot, Tinnevelly, South Canara, and Malabar to the United Kingdom, her biggest customer (taking 7,325 lbs.), Turkey (in Europe and Asia), Natal, Egypt, Arabia, Ceylon, Persia, and South Australia. This deep-sea export trade accounts for 18,184 lbs. of spice. The coasting trade to Bengal, Bombay, Sind, Burma, Cutch, Goa, Kathiawar, and Travancore ports accounts for 382,416 lbs. Bombay is the biggest buyer, taking 304,248 lbs., the greater part of which is again exported.

Outings.

The employés of Messrs. Willows, Francis, Butler & Thompson, of 40 Aldersgate Street, E.C., had their annual excursion on July 18. The party went to Edgware, where a large number sat down to an excellent dinner at the Green Man. A cricket match (Office *v.* Warehouse) followed, ending in an exciting win for the Office by one run. The concert that came after turned out an all-round success. The health of the firm and of Mr. H. J. Willows (whose absence was deplored) was proposed, and, taking it all in all, a most enjoyable day was spent.

The employés of Messrs. Burgoyne, Burbidges & Co. on July 18 celebrated the one hundred and sixty-second birthday of the firm by visiting Hastings for their annual outing. About two hundred and fifty sat down to dinner in the Drill Hall, the chair being occupied by Mr. H. R. Arnold, who was supported by Mr. Chas. W. White, F.R.G.S., Mr. Bryant (C. H. Bryant & Co.), Mr. Taubman (Morson & Son), Mr. C. Hawkins (G.C. Railway Company), Mr. George Arnold, and others. The toast of "The King" being duly honoured, that of "The Firm" was given by Mr. C. W. White, the firm's Indian representative, who attributed the great success of the firm to the hearty co-operation of its employés, especially those of long service, of whom a goodly number were present. Mr. Arnold responded. The return journey was made at seven, and town reached soon after nine, all having spent a thoroughly enjoyable day.

The employés of Messrs. Davy, Hill & Co., Southwark, S.E., had their annual holiday on July 11. The selected place was Arundel, and a large party spent a thoroughly enjoyable day there. The proprietor of the Norfolk Arms provided an excellent dinner, which was fully appreciated by his guests. Mr. R. Aird occupied the chair, supported by Mr. G. Wallis. "The Firm" was proposed by the Chairman, and was very heartily received with musical honours. Mr. G. Wallis proposed a vote of thanks to the stewards, but, few speeches being the order of the day, the company soon dispersed and found their way in various conveyances to Littlehampton, where an hour or two was spent by the sea. Returning to Arundel, tea was partaken of, and a ramble through the Duke of Norfolk's beautiful park ended in time to catch the appointed train back to London, and a happy day, not marred by a single unpleasant incident, was brought to a close.

Messrs. Smith & Sons, wholesale druggists and manufacturing chemists, Norwich, entertained their employés to an outing on July 14. The party, mustering over sixty, assembled at Foundry Bridge, whence they proceeded by the steamer *Jenny Lind* to Coldham Hall. At 5.30 the party sat down to a cold collation. Mr. J. de Carle Smith presided, and was supported in the vice-chair by his partner, Mr. Richard Smith. At the close of the repast Mr. C. E. Stevens, the head of the office staff, proposed a vote of thanks to the firm. This was heartily supported by Mr. E. B. Buttrum, the senior representative of the firm. Mr. J. de Carle Smith, in the course of his reply, pointed out that the firm was one of the oldest in the Kingdom, having been established over a century. He was pleased to say that the kindest and best possible feeling existed throughout the establishment, and that what success had been achieved by the firm was mainly due to the loyal support and the active co-operation afforded by everyone in connection with the business. During the afternoon and evening a band entertained the company with a varied programme of music, and the party dispersed at Foundry Bridge after a successful and enjoyable outing.

Hull Chemical Society.—The inaugural meeting of this Society was held in the Hull Technical School on July 15, there being a good attendance of professional chemists and others. Mr. Thomas Luxton, B.A., B.Sc., was elected to the chair, and it was decided to hold meetings for the winter session on the second Wednesday of each month, at 8 P.M., at which the reading and discussion of papers, &c., on chemical and allied subjects will be given. The following officers were elected:—President, Mr. A. H. McIlwaine; Vice-Presidents, Messrs. J. Baines and J. Storar; Secretary, Mr. Thomas Luxton; Treasurer, Mr. H. Peters; Committee, Messrs. Appleyard, F. Drake, Ireland, E. H. Earle, and Roberts. After the meeting forty-three members were enrolled.

PILLONUS THE CONSILII AND PHARMACIA.

A Fable Post Æsopum (longissime).

Once upon a time there was a tiny republic called Pharmacia, surrounded on all sides by the territories of a mighty Empire, renowned the world over for its liberty, fraternity, and equality; but although this little republic had object-lessons of progress on every side, it was sadly backward and very exclusive—in fact, it was several hundred years behind the times. Moreover the inhabitants, doubtless as a result of this, were very surly, morose, and bigoted. They lived for themselves, cared nothing for the rest of the world, and the fewer the inhabitants of their country the better they liked it. The Government in many ways was strange and peculiar. The President, named Pillonus, was assisted in the government of the republic by a limited number of men called Consilii. These men thought a great deal of themselves (although elected by a very small proportion of the citizens, who were called Chemici), and were firmly devoted to each other, being bound together by the effort, which amounted to a passion, to keep out as many people as possible who desired to become citizens.

The republic had no regular army, but its borders were ceaselessly watched by a number of lynx-eyed men called Examini, whose duty it was to allow none to enter Pharmacia without their approval and consent. Now, it must be understood that besides the citizens, or Chemici, there were a great many young men who helped them in their work; they were called Assisti. In connection with these there was a peculiar and somewhat unnatural custom, that before they could become citizens or Chemici they had to leave the republic and become even as the alien outsiders, and go through various ceremonies and ordeals under the eyes of the Examini. Now, the Assisti were greatly frightened at the Examini (sub-order Pestlemortaræ), for terrible tales of ferocity and sharpness, and of the uncertain nature of the ordeals that all would have to undergo, were told round the camp-fires of the Assisti. Indeed, so wrought upon were some of them that when the time came they dared not face the Examini, and even the great majority were so affected that they were not in a proper condition to accomplish the task or go through the ordeals imposed upon them by the Examini. Thus it happened that an increasingly large number were refused admittance to Pharmacia, and bitter were the cries and threatenings of the Assisti against Pillonus, his Consilii, and the Examini.

This hatred towards Pillonus is thus explained. In the early days of the republic the Examini were much more merciful towards the Assisti, and did not extract so much gold from them; but it came to pass as time went on that the Examini were compelled by Pillonus and the Consilii to impose greater tests and severer ordeals, besides exacting greater taxes of gold from them; indeed, so much gold was taken from them that it was reported that without it the government could not be carried on. Besides these burdens and difficulties of the Assisti, Pillonus had imported from a far country, called Deutchia, some men to be Examini of the sub-order Professoriæ, who were more severe to the Assisti than ordinary Examini (sub-order Pestlemortaræ) had been. These imported Examini in their hearts despised Pillonus and the Consilii, as well as the wretched Assisti; and their lofty scorn when the Assisti came unto them was terrible to behold. Now, the mighty Empire surrounding Pharmacia was its Suzerain, and from time to time reports were sent to its Privus Consilius of the numbers who were refused admittance as citizens of Pharmacia. Then at last the whole of the Assisti petitioned the Suzerain to protect them and the Suzerain stepped in and overthrew Pillonus and the Consilii, and took the reins of government into its own hands. Under the new order the long-afflicted Assisti had no fear left in them, and Pharmacia became a delightful land to live in.—*A. O.*

Sam's Sad Story.

Sam Smith had much naughtiness in him
To piety no one could win him;
    And cocktails quadruple
    He drank without ℈
Clear down to the very last ♏.

Head clerk in a drug-store was Sam,
But sickness he'd frequently sham,
    And borrow a dime
    From the till (which was crime!)
In order to purchase a ʒ.

The druggist, at last, said: "An ℥
Of prevention is worth, I pron℥,
    A full pound of cure;
    You're crooked, I'm sure,
So I think I will give you the b℥!"

—*San Francisco Druggist.*

Correspondence

TO CORRESPONDENTS.—Please write clearly and concisely on one side of the paper only. All communications should be accompanied by the names and addresses of the writers. If queries are submitted, each should be written on a separate piece of paper. We do not reply to queries by post, and can only answer on subjects of general interest.

The Organisation of Commerce.

Sir,—In moving, at the Society of Chemical Industry at Bradford, a vote of thanks to the retiring President—Mr. Ivan Levinstein—for his services and his address, Sir Wm. Ramsay (the President-elect) took occasion to refer to the organisation of the German army. The story of its imitation by the nations of Europe need not be repeated; but Sir William stated that a committee exists to-day in Berlin for the organisation of commerce. This committee determines what shall or shall not be done to further commercial interests or to remove obstacles in the path of a conquering progress for German trade. It determines railway rates, subsidies, bounties, and co-operates in the direction of technical education and the spread of knowledge of commercial matters throughout the world. Of course, the moral is that if we are to hold our own, much less to compete, we must collectively organise—sink our jealousies and combine to demand and insist upon the establishment of a non-political ministry of commerce, supplemented by a staff of up-to-date business-men. There is little that can be urged against the permanent officials except the absence of modernity in knowledge and methods. Mr. Levinstein has, in his two presidential addresses, urged this matter very strongly. After this statement from his own knowledge by Sir Wm. Ramsay, surely the matter must assume urgency. Chambers of commerce everywhere must demand a concession at once necessary to business and to patriotism. Having had so much to do with the spirit question, I may venture the opinion that so urgent a concession as regards freedom from duty for industrial use would have been at once inquired into on commercial grounds alone, instead of being, as now, held over for fear of vested interests on the one hand, and to await the result of inquiry into our fiscal system on the other. With the former it could not interfere, being in the nature of inducing a larger, and therefore cheaper, output, and with the latter it has equally nothing to do. It is well to remind pessimists that the stagnation in this matter is only a question of time, since an actual alteration of the law of the Spirits Act of 1880 is necessary before the distiller can meet the demands of modern need and competition. No deputation to the Chancellor of the Exchequer would be listened to while this fiscal question is being discussed, and in more ways than one paralysing effort and officials. I have good reason for believing that next session the matter will be considered fully, and probably a departmental committee will be appointed to look into the whole subject. Better late than never. But what a moral does Sir Wm. Ramsay's statement point!

Yours faithfully,

Thos. Tyrer.

Stirling Chemical-works,
Stratford, E.

Penny Trade.

Sir,—Allow me to support Mr. James Reid upon the question of the penny trade. The Inland Revenue authorities cannot logically differentiate between articles costing 1*d.* and 1*s.*, and while we all agree that a 1½*d.* tax on a 1*d.* or 2*d.* line is a practical absurdity, it surely must be seen that no one is likely to try the experiment. By following the path of least resistance and adapting the label to meet the new reading, as a chemist supplying the needs of an industrial population I hail with satisfaction the change which the genius of Glyn-Jones has evolved. It is neither pleasant for, nor just to, the chemist to notice in every little huckster's shop a varied assortment of pills, powders, and potions, generally on cards, all boldly labelled with the name of an ailment or ailments, and the imposition of a disability regarding these may tend to the consideration of whether the sale of the few remaining items not struck at is worth the candle. Thus, probably, once again may the preparation and sale of medicines revert into legitimate hands, and the status of the chemist improve. While not professing clairvoyance, I believe the limited-company bogey will by the operation of this decision be rendered harmless in time, and the apprenticeship question will be solved to the advantage of both the youth and his employer. But the chemist must first set his house in order. A judicious use of printers' ink upon his public will soon do the rest. Yours truly,

C. and D. (100/55.)

Sir,—I think it quite time the inevitable reaction set in about this stamp-duty business. In this town there are to my own knowledge four firms in a large way of business, employing carts and horses for delivery, who do nothing else but supply small shops with 1*d.* pills and other 1*d.* druggist lines, &c. If this new reading of the Act puts an end to these firms the chemists of this town must divide between them a gross taking of at least 4,000*l.* Another man trades as a herbalist here, supplies 1*d.* carded pills only, and has quite a big shop-window filled with huge vases of coated pills running through the whole gamut of ailment-names. This man advertises in the local paper, and takes a column space. Really, Mr. Editor, the chemists are mad to find fault. It is a godsend to all the smaller chemists, and at the expense to each one of a few pounds only for labels. What the trade should do is to comply with the law, and see that others follow suit.

Yours truly,

Optimist. (100/72.)

Sir,—Some of your correspondents seem to think the poor chemist will have reached his Utopia when the Inland Revenue authorities begin to administer the recent definition of the Medicines-stamp Act—*i.e.*, stopping the small shopkeeper selling pennyworths of liver-pills, &c. I have not seen anyone of them express the idea of the possibility of the small grocer, &c., taking out a patent-medicine licence, and breaking packages and selling Mr. Everybody's pink, black, or brown pills, powders, &c., in the nimble pennyworth, a practice due in the first instance to the chemist himself. It passes my comprehension that a man should spend his time and means to gain what some are pleased to call a profession and blazen forth to the public that he is a member of the Pharmaceutical Society, &c., and be content to sell Mr. Somebody's pills in a penny paper screw. Truly a highly pharmaceutical transaction. Yours, &c.,

Looking Forward. (102/33.)

Sir,—Having recently had the opportunity of conversing with chemists and wholesalers in the Midlands and North of England, I can speak with some accuracy as to their opinions in connection with the new reading of the Medicine-stamp Acts. The general feeling is that the action of the Commissioners in making "Cough-mixture" labels, &c., liable is their reply to the Glyn-Jones case, and in very few instances indeed is the idea prevalent that advantage will follow the alteration. The chemist is bound to look at the matter entirely from a commercial aspect. He sees a problematical gain in the Glyn-Jones decision, and he realizes a very real loss when he reflects that his cough-mixture formula must be given away, or his bottles must be stamped. If he caters for the small wants of the people he must alter many labels, and he will be surrounded with a hundred pitfalls when he comes to label a 1*d.* or 2*d.* bottle or box. If he has, in the course of a very worried and trying existence, endeavoured to make a legitimate profit by doing a small wholesale trade in the villages, he finds that trade either gone or revolutionised beyond knowledge. In other words, the new reading of the Act is another interference in his business, one of a series which seems to know no finality.

As regards the results of the alteration little can be known, but one thing will happen: the small shopkeeper is not going to be snuffed out, and the firm that caters for him will see that his trade is still carried on, even if on an altered basis. This will probably be on the line of stamping his medicines, so as to allow the shopkeeper to break bulk. If so, where is the advantage of the chemist? The multiplication of patent-medicine licences unquestionably means the growth of the "drug-store" both small and large. The alteration of the Act means ultimately much loss and practically no gain to the chemist.

What is wanted? I think a *new* Act is required. One which will be equitable to all, and which will carry out the original idea of the P.M. Acts—viz., to stamp quack remedies. The incidence of the present Acts is a scandal. What lawyer understands the Acts? If to-day one does, he probably will not to-morrow. There is great complexity and no finality about them, and to think that every chemist, harassed as he is already by poison laws, coroners' inquisitions, and a hundred other things, should be at the mercy of some sneakish spy who finds that he has innocently used a label offending against these Acts is an abominable shame. The chemist needs a new Act on sane lines, framed from a practical standpoint, whose clauses are clear, concise, definite, and easily understood. Is it too much to ask for such an Act? I think not, and my solution of the difficulty is—Go on "as you were" until the new Act is through.

July 21. Yours, WHOLESALER. (103/36.)

Messrs. R. Parkinson & Sons (*Burnley*) point out that it is only since January, 1902, that Somerset House has included the paragraph regarding parts of the human body in the general observations on medicine-stamp duty. They also mention that retail chemists should be prepared for companies and large merchants possibly taking this attitude —namely, that if they are checked in doing a reasonable business that they have done up to now, they may go into the question of patent medicines wholesale, and vigorously, to the detriment of the retail trader.

They might possibly also find some method of adopting the formulæ which will be placed upon retail chemists' preparations under the Glyn-Jones privilege, and rushing these preparations out, so as to make the lot of retail chemists worse than ever. They consider that the only wise course is to get Somerset House to revert to the practice which has existed so many years as regards "cough-mixture," &c., and the "organs" of the body.

Heroin and Aspirin.

SIR,—In a recent issue of THE CHEMIST AND DRUGGIST I noticed an article by H. C. T. Gardner, F.C.S., headed, "Three Coming Remedies," to which I should like to add a few words. The author complains about the non-solubility of heroin, and advises, when prescribed in mixture, to add a few minims of dilute acetic acid, if solution is required. It does not seem to be sufficiently known that heroin is supplied to the trade also in form of its hydrochloric salt, which is easily soluble in water in a proportion of 1 to 2. The watery solution has a neutral reaction (whereas heroin pure has an alkaline reaction), and gives no blue colour with chloride of iron. In fact, it is mostly prescribed in this way, and very rarely as the pure base.

The second remedy, "aspirin," is best administered dry. If the taste forms an obstacle, it is easily taken with some sweetened water. Quite recently Mr. Martindale introduced an effervescent aspirin, which is a pleasant preparation. Care must be taken to avoid simultaneously prescribing alkalies with it, such as sodium bicarbonate, &c., which would lead to an earlier disintegration of the compound. On the contrary, in cases of constant defective acidity of the stomach, it might be recommended to administer aspirin in small quantities of water containing hydrochloric acid.

Yours faithfully,
Manchester, July 18. R. HENNINGS.

Indian Pharmacy.

SIR,—Your comment on "Indian Pharmacy" in the issue of May 30 will no doubt prove very interesting to some of your readers. It, however, contains some statements which may mislead your English readers. Will you therefore allow me to offer some remarks on the same subject and oblige? The article on which you based your comment was contributed by myself to the *Amrita Bazar Patrika*, and the *Times of Assam* quoted the article. The statements regarding the present position of the indigenous-drug trade made in my article are quite true, inasmuch as they are based on a careful study of the drugs, and on a long business-connection with some of the largest dealers in Indian drugs. There are certainly many obstacles, such as adulteration of raw drugs, want of uniformity in the standard of the preparations, careless manufacture, &c., &c., in the way of the development of the indigenous-drug trade, but no one who has studied the subject on the spot can deny that the trade will begin to prosper as soon as these obstacles are removed. The intended closing of the Laxman Meran Laboratory at Kathiawar, which has led you to doubt the accuracy of some of my statements, is, in fact, no indication of the unpopularity of the preparations of the indigenous drugs manufactured according to the methods of European pharmacy; on the contrary, it is rather an indication of the unpopularity of institutions having for their object any kind of reformation in the old Hindu customs or usages. It should be remembered that the Kathiawar Laboratory had for its main object the instruction of the *vaids*, or native medical practitioners, in the preparation of drugs according to the European pharmaceutical methods. Now, that is rather a premature enterprise. The indigenous-drug business can very well be started as an independent one, and as such it has a hopeful future before it; but when it is sought to persuade the *kavirajes* or *vaids* to adopt the new methods of pharmacy, and to develop the drug-trade through them, the movement is bound to receive such checks and meet such oppositions as will render the same fruitless. Time is not as yet ripe for any endeavour in that direction.

Preparations of indigenous drugs manufactured by such firms as the Peacock Chemical-works of Calcutta and others are in more or less constant demand. What little has been done in the way of expansion of the Indian drug-market is mainly due to the exertions of these firms. But the endeavours of one or two firms, however strong they may be, are not strong enough to vanquish the spirit of adulteration and careless manufacture which reigns supreme in the land. Thus persons who have a mind to use the preparations of these drugs find it often difficult to distinguish the genuine from the spurious preparations, and adopt the best course advisable in such cases—*i.e.*, they do not use the preparations at all.

There is no want of drugs, and of very efficacious ones too, in India. Our business-men are, however, very reluctant to move out of the old groove, and the majority of our medical men are more given to the enjoyments of life than to the investigation of something new or noteworthy. The little progress that has been done in the research into the chemical and therapeutical nature of Indian drugs has for the major part been done by the European chemists and medical men. Nevertheless, there is a large number of drugs regarding the chemical or therapeutical nature of which we know next to nothing. The writer in the *Times of India* who makes an assertion to the contrary speaks, I believe, more from a botanical than a therapeutical point of view.

It is unnecessary to enter into the details and compare the numbers of better-known and less-known Indian drugs. It will be sufficient to say that the drugs included in the Indian and Colonial Addendum to the B.P. are to be considered as types of drugs that are found in India. That the Addendum does not contain a full list of Indian drugs in ordinary use here, even not all the important drugs, will be apparent to anybody who will take the trouble to consult such eminent authorities on Indian drugs as Dr. W. Dymock ("Vegetable Materia Medica of Western India") and Dr. N. C. Dutt ("Materia Medica of the Hindus") and others.

11 College Square, Calcutta, Yours sincerely,
June 25. N. B. DUTT.

Legal Queries.

Consult "The Chemists' and Druggists' Diary," 1903, before formulating Queries.

95/22. *Clara.*—If a person ask you (after December 31) for liver-and-stomach mixture, and you sell an article so labelled, but with the words "liver and stomach" partly obliterated, the mixture must be stamped. That is too obvious an attempt at evasion.

95/47. *Kimia.*—If the fortnight's holiday agreed upon was to be given yearly, and the usual time at which it is given comes within the period when the engagement terminates, the holiday has to be given or its equivalent in salary.

95/2. *W. F.*—Thanks for the quotation from "Alpe," page 29, *re* selling small quantities of dutiable medicines. See reply to "E. J. M." on page 104 of our last issue.

100/51. *H. S. I.*—You will find all the information regarding the Pharmacy Acts that you require in The Chemists' and Druggists' Diary.

100/60. *Pest.*—The pills which you mention are likely to be harmful to pregnant women, and their sale to such persons will bring you within the provisions of the Offences to the Persons Act (see The Chemists' and Druggists' Diary, page 543).

95/72. *L. J. R.*—"Traveller," who writes to a Birmingham paper about grocers making themselves right as to ailment-named medicines (unstamped) by taking out a licence, does not know what he is writing about. After December 31 only qualified chemists may sell such articles unstamped.

102/2. *Willie.*—Is it usual for retail chemists to pay extra for work done during ordinary business hours, such as stocktaking? [No.] Is it usual for assistants to work extra hours during stocktaking? [Yes.] If the staff does work extra hours, is anything given beyond the stocktaking dinner? [We know places where not even a dinner is given. The rule in pharmacy, as in all semi-professional or skilled labour businesses, is for the staff to work until it is done; none but porters or the like are paid overtime. Sick pay and holidays more than compensate for the little extras that apprentices and assistants do.]

Miscellaneous Inquiries.

We endeavour to reply promptly and practically to trade questions of general interest, but cannot guarantee insertion of replies on a particular date, nor can we repeat information given during the past twelve months.

55/5. *Bombay.*—(1) We cannot find either an emplastrum or unguentum lithargyri devised by Unna. Gelatina Lithargyri (Unna) is fairly well known. It consists of—

Gelatinæ albæ	5
Aquæ destillatæ	65
Glycerini	20
Lithargyri	10

(2) **Raspberry Syrup** for soda-fountains:

Raspberry-juice	1 pint
Syrup	7 pints
Citric acid	5 dr.
Tincture of quillaia	4 dr.

Mix.

55/56. *Nemo.*—The fact that some assistants were unable to recognise the nux-vomica beans you found in a sample of ginger hardly justified your deduction that the Pharmaceutical Society are not doing their duty. The more general complaint is that the examinations are already too stiff.

87/54. *Pyrotechnist.*—The best apparatus for moulding into cubes a moist composition for pyrotechnic purposes would be one similar to the tablet-triturate mould described in the "The Art of Dispensing." Any of the apparatus-manufacturers who advertise in the *C. & D.* would quote for one. Please note it is illegal to make such articles in a druggist's shop.

85/40. *F. C. I.*—"Pharmacopedia" is a good book, especially for students, and we notice that our Students' Corner prizemen frequently ask it as their award. It is up to date on materia medica and also in respect to the theory and practice of pharmacy. As a commentary on the British Pharmacopœia it does not fill the same place as "Squire," and in that respect is more suited for the library than the shop-desk.

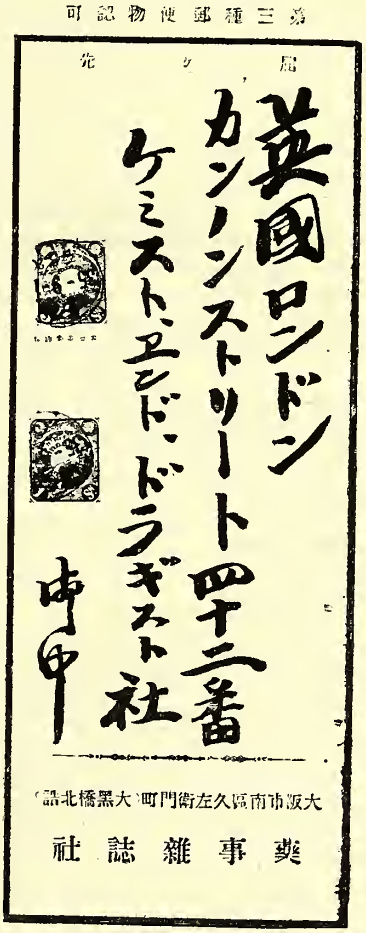
88/17. *Verax.*—The best thing to soak off glass tablets on windows is a mixture of equal parts of potash solution, methylated spirit, and water. Apply to the top edge and all round with a brush, repeating now and then until the plate is loose.

96/46. *Poho.*—The name **Poho** is applied to Chinese or Japanese oil of peppermint containing all the menthol. Such oil is not now imported, but you can easily get dementholised oil and saturate it with menthol.

95/1. *Inquirer.*—Before **Opening a Pharmacy in New York** it is necessary to be registered by the Board of Pharmacy. See an article in the *C. & D.*, March 7, 1903, page 412.

96/11. *J. C. P.*—We have no idea what the composition of Doan's pills is.

92/10. *G. B.*—You will find in back numbers of the *C. & D.* plenty of information as to the cost of living for chemists' assistants in South Africa and India. You should look them up for the past three or four years.



第三種郵便物認可

届ヶ先

英國ロンドン
カンノンストリート四十二番
ケミスト、エンド、ドラギスト社
御中

大阪市南區久左衛門町（大黒橋北詰）

藥事雜誌社

A Japanese journal comes to us with this address. The Post Office appears not to have any trouble in telling that it is meant for the Editor of The Chemist and Druggist

British Pharmaceutical Conference.

The following additional papers have been received for the Bristol meeting:—

"The Quantitative Separation of Strychnine from Quinine." By E. F. Harrison and D. Gair.

"Note on the Volumetric Use of Fehling's Solution." By E. F. Harrison.

"Note on the Refractive Index of Essential Oils." By. E. J. Parry, B.Sc., F.I.C.

"The Non-existence of Mydriatic Alkaloid in Lactuca Virosa." By J. O. Braithwaite and H. E. Stevenson.

The exports of star-aniseed from Wuchow during 1902 amounted to 11,844 cwt., against 12,259 cwt. in 1901 and 9,803 cwt. in 1900.

The exports of wood oil from Wuchow during 1902 amounted to 34,280 cwt., against 35,576 cwt. in 1901, 27,964 cwt. in 1900, and 23,761 cwt. in 1899.

Trade Report.

NOTICE TO BUYERS.—The prices given in this section are those obtained by importers or manufacturers for bulk quantities or original packages. To these prices various charges have to be added, whereby values are in many instances greatly augmented before wholesale dealers stock the goods. Qualities of drugs and oils vary greatly, and higher prices are commanded by selected qualities even in bulk quantities. It would be unreasonable for retail buyers to expect to get small quantities at anything like the prices here quoted.

42 Cannon Street, London, E.C.: July 22.

THIS report deals with the markets up to Wednesday evening. Later intelligence, which will include a full report of the drug-auctions to be held on Thursday, will be found in our Coloured Supplement.

There is no appreciable improvement in business to be noted, and no important alterations in value have so far taken place. Quinine has commanded a fair share of interest, and the upward tendency noted last week has continued, although values only show a fractional advance. Opium maintains the recent firmer position, and, with a fair demand for most descriptions, values have been firm. Cream of tartar is a shade easier, owing to absence of orders, although crude tartar shows no falling-off in price. Citric and tartaric acids are both quiet this week. Holders of Japanese vegetable-wax have advanced their selling-prices, but no business appears to have been done at the higher range. In essential oils there has lately been some quiet buying of a certain American brand of peppermint oil, for re-shipment to the United States.

Arrivals.

The following drugs, chemicals, &c., have arrived at the principal ports of the United Kingdom from July 16 to July 21 inclusive: Acid, acetic (@ Rotterdam), 16; acid, benzoic (@ Bremen), 2; acid, citric (@ Messina) 20, (@ Bordeaux), 13; acid, lactic (@ Hamburg), 5; acid, tartaric (@ Rotterdam 80, (@ Antwerp) 12; albumen (@ Shanghai), 25; areca, 40; argol (@ Lisbon) 46, (@ Messina) 35; arrowroot (@ St. V.), 452; "balsams" (@ Hamburg), 8; bleaching-powder (@ Hamburg), 37; borax (@ Hamburg), 28; Calabar beans, 9; cardamoms, 135; caraway-seed (@ Amsterdam), 20; cinchona (@ Ceylon), 305; citrate of lime (@ Messina) 69, (@ Palermo) 29; citronella oil (@ Galle), 21 *in tr.*; coca-leaves (@ Ceylon), 6; cod-liver oil (@ Newfoundland), 19; cream of tartar (@ Tarragona) 20, (@ Bordeaux) 185; drugs (@ Yokohama) 10 cs., (@ Marseilles) 49; essential oils (@ Palermo) 25, (@ Havre) 21, (@ Messina) 163; eucalyptus oil (@ Australia), 278 cs.; galls (@ Marseilles) 64 cs., (@ Shanghai) 200; ginger (@ Hong-Kong) 154 cks. 11 cs., (@ Yokohama) 255, (@ Bombay) 59; honey (@ N.Z.) 132 cs., (@ Jamaica) 211; insect-powder (@ Trieste), 6; jalap (@ Havre) 40; lime-juice (@ Jamaica), 20 pns.; manna (@ Palermo), 2; nux vomica (@ Madras), 666 bgs.; potash chlorate (@ Gothenburg), 160; pot. cyanide (@ Hamburg), 50; quinine (@ Amsterdam), 5 cs.; rose-leaves, 16; saccharin (@ Antwerp), 14; sarsaparilla (@ Hamburg) 78, (@ New York) 123 bxs.; scammony-root (@ Jaffa), 34; senna (@ Bombay), 239; soda chlorate (@ Gothenburg), 82; soda crystals (@ Ghent), 450; sulphur (@ Catania), 720 cks. 1,130 bgs. 301 brls.; tamarinds (@ W.I.), 13 × $\frac{1}{2}$ brls.; turmeric (@ Bombay), 407; vanilla (*viâ* Auckland), 12 cs.; wax, bees' (@ Sydney) 31, (@ Bombay) 4, (@ Jamaica) 4, (@ Morocco) 27, (@ W.C. Africa) 152; wax, ceresin (@ Rotterdam) 10, (@ Hamburg) 35; wood oil (@ Shanghai), 20; wood spirit (@ Rotterdam) 20, (@ Hamburg) 38, (@ Philadelphia) 170.

Heavy Chemicals.

The general condition of the heavy-chemical market remains unchanged from that referred to in recent reports, an all-round quiet tone being the prevailing feature. Deliveries against contracts for both home and export account are fairly good, but there is a distinct lack of new business of any importance. Values for both main and miscellaneous products show very little fluctuation, and they are mostly steady at late figures.

ALKALI PRODUCE.—Bleaching-powder is entirely neglected at present, whilst caustic soda is quiet and moves slowly. Prices are without alteration. Ammonia alkali continues to move off briskly, and soda crystals and bicarbonate of soda fairly so. Salt-cake is a little firmer again.

SULPHATE OF AMMONIA, with continued quietness, has declined further in value. Beckton, 12*l.* 15*s.*; Beckton terms, 12*l.* 10*s.*; London, 12*l.* 11*s.* 3*d.* to 12*l.* 12*s.* 6*d.*; Leith, 12*l.* 12*s.* 6*d.*; and Hull, 12*l.* 10*s.*

BENZOLS, although flat, are nevertheless moving rather better at $8\frac{1}{2}$*d.* per gal. for 90 per cent. and 7*d.* per gal. for 50 per cent. Aniline oil and salt are better at $5\frac{3}{4}$*d.* to 6*d.* per lb. and $4\frac{3}{4}$*d.* to $4\frac{7}{8}$*d.* per lb. respectively.

RECOVERED SULPHUR continuing in short supply maintains a very steady tone at 5*l.* 5*s.* to 5*l.* 10*s.* per ton, free on rails, in bags.

PEARL-HARDENING in steadier demand at 60*s.* to 65*s.* per ton, free on rails or free on board, in usual casks.

SOUTH DURHAM SALT is very quiet at 10*s.* 6*d.* to 11*s.* per ton, f.o.b. Tees.

ZINC SALTS are in steady request, and have more than fully maintained late advance in prices. Zinc-sulphate crystals, 6*l.* to 6*l.* 10*s.* per ton. Zinc-chloride solution, 100° Tw., 6*l.* 7*s.* 6*d.* to 6*l.* 12*s.* 6*d.* per ton.

SATINITE in steady request for home and export at unchanged rates of 62*s.* 6*d.* to 65*s.* per ton, f.o.r. or f.o.b. Liverpool, in usual casks.

CALCIUM CHLORIDE quiet at 57*s.* 6*d.* to 60*s.* per ton, f.o.b.

ACID, CITRIC.—Quiet, at from 1*s.* $0\frac{3}{4}$*d.* to 1*s.* 1*d.* per lb., spot.

ACID, TARTARIC, is steady, at 1*s.* $1\frac{1}{4}$*d.* for foreign and 1*s.* $1\frac{1}{2}$*d.* for English.

BALSAM COPAIBA.—The exports of copaiba from Maracaibo during 1902 amounted to 39,135 kilos. against 40,807 kilos. in 1901.

CAMPHOR.—The report which has been freely circulated regarding the loss of a quantity of crude camphor owing to a fire on board the s.s. *Heathford* has since been modified by a cable from Ceylon stating that the camphor in question has been salved.

CARDAMOMS.—The exports from Ceylon for the half-year were as follows:

	1903	1902	1901	1900
Lbs.	410,315	314,138	244,032	298,178

There has been a remarkable rise in the cardamom-produce of the Travancore forests. The Forest Department were able to collect from the reserved area 65 candies of cardamoms, the average collection in former years being only 25 candies per annum. The price of cardamoms is Rs. 1,000 per candy.—*Indian Agriculturist.*

CINCHONA.—Full details regarding the Amsterdam cinchona auctions will be found under "Cablegrams" in our coloured Supplement. The half-year's exports from Ceylon are as follows:

	1903	1902	1901	1900
Lbs. ...	117,574	322,839	369,312	252,724

From Maracaibo during 1902 4,470 kilos. was exported, against 6,252 kilos. in 1901.

CLOVES.—Zanzibar are firm, and there has been a fair demand, spot selling at $4\frac{3}{16}$*d.* for fair, and for arrival 4*d.* c.i.f. has been paid for October-December shipment.

COCOA BUTTER.—The auction to be held at Amsterdam on August 4 will consist of 30 tons Van Houten's, 16 tons de Jong, 10 tons Mercuurstaaf, and 5 tons Mignon.

CREAM OF TARTAR.—Absence of business has brought about a slightly easier feeling, and it would now be possible to buy 98-per-cent. powder at 90*s.*, 95-per-cent. at 87*s.* 6*d.*, and best white crystals at 87*s.* per cwt., spot. Prices for the raw material, however, show no falling-off.

ISINGLASS.—At the periodical auctions on Tuesday there was a good demand, Brazil selling at 1*d.* to 2*d.*, and West India about 2*d.* dearer rates. Bombay was in heavy supply, and full prices were paid for what lots were sold. Penang sold steadily, but for Saigon there was practically no demand.

OIL, ANISEED STAR.—Under date of June 19, Hong-Kong reports sales of 20 piculs at 4*s.* $3\frac{1}{2}$*d.*, c. and f. The tendency being weak, 4*s.* 3*d.* would lead to business. The exports from Wuchow (China), one of the principal ports of shipment, during 1902, amounted to 1.244 cwt., against 665, 90, 242, and 329 cwt. in 1901, 1900, 1899, and 1898 respectively. From Pakhoi only 19,333 lbs. (4,720*l.*) was shipped during 1902, against 166,660 lbs. (40,682*l.*) in 1901. These decreased figures may be partly accounted for by the fact that the trade is now diverted through Tonkin, and to the disturbed state of the chief producing district in Kuanghsi. Four shillings per lb. seems to be the lowest price at which there are sellers on the London market.

Oil, Cinnamon.—The exports of bark and leaf-oil from Ceylon for the first six months of the year amounted to—

	1903	1902	1901	1900
Oz.	21,844	52,430	12,218	13,316

Oil, Citronella.—The exports from Ceylon for the first half of the year (January 1 to June 29) amounted to 518,119 oz., against 691,087 oz. in 1902, 634,608 oz. in 1901, and 605,644 oz. in 1900.

Oil, Cod-liver.—Our Bergen correspondent writes, on July 18, that the market is lifeless, finest non-congealing cod-liver oil being unaltered at 480*s.* per barrel, f.o.b. Bergen. The exports from Bergen to date amount to 1,381 barrels, against 4,962 barrels at the same time last year. A private advice from Bergen, dated July 18, quotes from 445*s.* to 450*s.* per barrel, free rail Hull, without engagement.

Oil, Eucalyptus.—The s.s. *Kaisow*, from various Australian ports, has arrived with 278 cases, in several consignments.

Oil, Peppermint.—There has been a brisk business in WCOP peppermint oil during the past fortnight on United States account, and we understand on excellent authority that several hundred cases have changed hands on behalf of one New York firm, who are buying all that is offered of this description at from about 8*s.* 3*d.* to 8*s.* 6*d.* per lb., spot terms. The transactions are mostly in small lots of 4 cases each, and a remarkable feature of the business is that the word "peppermint" is omitted from the brokers' contracts, the article being described as "essential oils." A cablegram received from the A. M. Todd Company states that "Distillation has commenced; yield poor." Interest this week is centered on the parcel of HGH. offered in the auctions "without reserve."

Opium.—There has been a fair demand in London, good Smyrna "druggists'" selling at 9*s.* 6*d.* per lb., spot, and at 9*s.* 3*d.* for Smyrna rejections. Tokat has also been sold at 10*s.* 6*d.* to 11*s.*, and Persian has continued in request, at from 9*s.* to 9*s.* 3*d.* for shipment to China, and for good 9*s.* 6*d.* has been paid, these prices showing practically no alteration.

Smyrna, July 10.—The opium market this week opened very firm and strong, in consequence of the extensive purchases effected last week for the American markets and speculative account. As soon as our sellers saw large buyers coming forward again they withdrew from the market, and the consequence was that speculators paid an advance, which resulted in the United States buyers quickly following up their lead, and thus our prices have been firmly established. The sales this week amount to 167 cases, chiefly for the American market. The arrivals in Smyrna to date amount to 203 cases, against 941 at the same period last year.

Constantinople, July 17.—The crop is evidently turning out much less than was expected, and this, no doubt, accounts for recent heavy purchases in Smyrna and Constantinople, where market has risen considerably. Speculators have bought during the past week over 20 cases "druggists'," at 8*s.* 9*d.* up to 9*s.* 4*d.* per lb., f.o.b. We, however, expect to see a reaction set in shortly, as the advance appears to us to be overdone, and we scarcely think United States buyers will care to follow it any longer.

Otto of Rose is quiet, buyers holding aloof, in view of the approach of the new crop. From 15*s.* to 17*s.* per oz. is quoted, the higher figure being for pure.

Pepper has been firm, but quiet, sellers of spot Singapore asking $6\frac{1}{4}$*d.* and $6\frac{7}{16}$*d.* to $6\frac{1}{2}$*d.* for August-October shipment. *White Singapore* on the spot is quoted $9\frac{1}{2}$*d.* to $9\frac{5}{8}$*d.*, and fair Penang at $9\frac{1}{4}$*d.*

Pistachio.—In his annual report on the trade of Kerman (Persia) during 1902 the British consul calls the attention of importers to the fact that the pistachios of Kerman are the finest in the world. Owing to their size and delicacy they are exported in their shells. The Consul will be glad to place any British importer in communication with a Persian merchant who would buy on commission. The rate of transport to the Coast he says is always low, and according to the new tariff there is no export tax. This year's crop is expected to be a good one.

Potashes.—Montreal potashes are almost unobtainable, 35*s.* being the nominal price. First American are quoted 33*s.* to 34*s.*, seconds not offering.

Quinine.—The firmer tone noted in the second-hand market last week has since continued, owing, it is said, to a better demand for consumption. On Monday a fair business was done, including spot and August delivery, at 11*d.* per oz. for good German sulphate in bulk. Subsequently further spot sales were made at 11*d.*, August at $11\frac{3}{8}$*d.*, and January-February at $11\frac{1}{2}$*d.* To-day (Wednesday) $11\frac{1}{8}$*d.* has been paid for spot stuff.

The exports of quinine-preparations, &c., from Germany during the four months ending April amounted to—

	1903	1902	1901
Kilos.	51,000	48,800	69,800

Senega is offered to arrive at 2*s.* 6*d.* per lb., c.i.f. terms, and on the spot from 3*s.* 2*d.* to 3*s.* 3*d.*, net, is wanted.

Star-aniseed.—A report, dated Hong-Kong, June 19, states that during the preceding fortnight 200 piculs were sold at 52*s.* 6*d.*, c. and f., for prompt shipment. Sellers were inclined to meet buyers, the market being quiet.

Wax, Japanese.—Holders on the spot have raised their prices 2*s.* 6*d.*, to 67*s.* 6*d.* per cwt., and for arrival higher prices are also asked—viz., 66*s.* 6*d.*, c.i.f., for August-September shipment.

A full report of the drug-auctions will be found in our Coloured Supplement.

Gambier in the West Indies.

About twelve years ago an effort was made to introduce the cultivation of gambier into the West Indies, but the results up to date have been negative, as the right conditions for its successful cultivation have not yet been found. A writer in the *West Indian Bulletin* deals with the subject, and, in concluding an interesting article, states that the negative results do not necessarily mean that all hope must be abandoned of gambier becoming, at some future date, a plant of economic importance in the West Indies.

American Peppermint-crop.

The following is a copy of private advices, dated June 5, which have been received in London since our last report: "The acreage at Lyons, Wayne County, was small, for two reasons—firstly, there were but few having roots to sell, and, secondly, there has been no rain since they were planted. Consequently much of it has not come up, and most of it that has is very light. We are suffering from one of the most extreme droughts we have had for years. A timely rain would, no doubt, change the conditions of things, but at present there seems to be no sign of wet weather. The amount of oil held in the country is not large, but the holders are gaining courage as the drought continues."

Japanese Peppermint-crop.

A report from Leipsic, issued by Messrs. E. Sachsse & Co., states that advices received by them from Yokohama, dated June 11, point to a harvest almost three times as large as the previous year, the probable output of which is estimated in one quarter at 200,000 catties, or 125,000 kilos., of oil and menthol. The first section, amounting to about 10 per cent., will probably come into the market about the middle of July; the second, of about 40 per cent., probably in September; and the supplies from the third section, of about 50 per cent., in November. It is generally believed that the new season will open with comparatively high prices, and that they will gradually decrease later. An important factor will be the result of the American harvest. The result of the harvest of 1899 was about 55,000 kilos.; 1900, about 35,000; 1901, about 60,000; and 1902, about 33,000 kilos. If the above-named estimate—*i.e.*, about 125,000 kilos. of peppermint and menthol—is correct, the prices of both these articles will probably come down considerably, quite independently of the results of the American harvest.

Papain from Montserrat.

According to a writer in the *Agricultural News* (Barbadoes) a small and remunerative industry in dried papaw-juice has existed at Montserrat for several years. The agricultural instructor, Mr. Jordan, recently reported that the trees are usually self-sown, growing among rocks on the mountain-sides, or else are planted around the houses of the peasantry. The peasants collect the juice in calabashes in to which a small quantity of water is first placed. The juice is obtained by lightly scoring the rind of the fruit with a knife or some other sharp instrument. As the juice falls into the water it thickens to the consistency of ice-cream, and in this state is sold to the manufacturer at the rate of ¾*d.* to 1*d.* an oz. There is at present a small plot of 120 trees under observation at the Grove Experiment Station. Of these about 25 per cent. are males or non-fruiting trees. The plot was planted in May, 1902, and has yielded to the end of December last—a period of about seven months—over 10 lbs. of juice. There are two varieties under cultivation, the long and the round fruited. Experience shows that the long-fruited variety bears earlier and nearer the ground; but it is claimed that the round variety gives the largest quantity of juice. One of the student gardeners at the station, where trees are plentiful, can collect on an average 4 oz. of juice per hour.

Italian Tartaric Materials.

The exports of tartaric materials from the Italian Continent from October 1, 1901, to September 30, 1902, were as under:—

Article	To	Quantity	Total
		Tons	Tons
1. Half-refined tartar	United Kingdom ...	200	
	United States ...	2½	
	Germany	399	
	France	137	
	Austria-Hungary and other countries ...	192	930½
2. Vinaccia argols ...	United Kingdom ...	272	
	United States ...	955	
	Austria-Hungary and other countries ...	953	2,180
3. Crude argols ...	United Kingdom ...	40	
	United States ...	2,268	
	Germany	130½	
	Austria-Hungary and other countries ...	480	2,918½
4. Wine lees ...	United Kingdom ...	350	
	Germany	280	
	France	590	
	Austria-Hungary and other countries ...	1,213	2,433
Total	... ...	...	8,462

Bulgarian Otto of Rose.

THE distillation of the Bulgarian otto-of-rose crop having now taken place, we are enabled to give more detailed information concerning it, the sum total of which amply bears out our previous reports with regard to the crop being one of the earliest as well as one of the largest on record. Should there be no serious complications in the Balkans, there is every probability of a continuance of the low prices which have ruled during the past four years. Summarising our earlier reports, it may be recalled that the harvest began as early as May 15, about a fortnight in advance of the usual time, and owing to the cool, fresh, and rainy weather which prevailed during the entire harvesting-season, the distillation of the crop lasted fully a month, or about ten days longer than usual. As would naturally be expected under such favourable conditions, the new crop has proved one of the finest brought to market. Our correspondent at Kezanlik, who has been at great pains to obtain authentic information, states that the total yield of rose-flowers this year amounted to the high total of 34,000,000 lbs. (there being approximately 250 rose-flowers to the pound). Of this 34,000,000 lbs. there were over 28,000,000 lbs. red rose-flowers, the balance of 6,000,000 lbs. being white roses. The total number of stills used to distil this year's crop were 14,200 in all, which gives on an average about 2,400 lbs. of flowers to each still, out of which were extracted about ten Turkish ounces of otto of rose. The quantity of rose-flowers used this year in making 1 T. oz. varies considerably, according to the locality and the quality of the flowers—from 200 lbs. to 260 lbs. to the ounce—the average being about 230 lbs. of rose-flowers, or about 57,500 roses. As usual, there are conflicting reports as to the total yield of otto, each exporter having his own opinion; but our correspondent has personally obtained full statistics about all that concerns this year's crop, and he places the total output at 140,000 to 145,000 T. oz., the lower figure being nearer the actual output. These figures do not, of course, include the adulterants that may have been used by the growers during the distillation of the crop, nor those that may be used by the exporters when they make their consignments for export.

In spite of the large crop the illicit importation of Turkish geranium, palma-rose, and German geraniol is even larger this year than usual. According to the *on dits* of the gossip-mongers of the rose-district, the total importation of all sorts of adulterants this year is about 800 kilos., or about 28,000 oz. As usual, most of it is imported for and bought by these exporters, who make all sorts of grades of otto, and sell it at all sorts of prices to suit every customer. Much of the sophistication is also done by the growers themselves, and this year the unscrupulous ones are more in numbers than usual. The chief cause of this is the low prices prevailing during the last three years. Instead of making money by rose-culture, they have been actually losing it, and in order to make both ends meet, many of them, against their own wishes, it is said, have been forced to adulterate their produce. When it requires from 200 lbs. to 300 lbs. of rose-flowers to make 1 oz. of pure otto, and this otto is sold in Bulgaria at 14*s.*, 15*s.*, and 16*s.* per oz., it practically leaves no profit to the peasant grower. If he does sell it at this rate, it is simply because all the labour in the culture and distillation is his own. Were he to pay for any labour or fuel the cost-price would considerably be above the present selling-prices.

Through the fear of immediate war with Turkey all the growers were anxious to sell their produce immediately after the harvest, and on account of this nervous feeling the new prices were fixed at once at the rate of 14*s.*, 15*s.*, and 16*s.* per T. oz., according to the congealing-point and the locality of the otto. Considering that the price of the flowers this year was a little over ½*d.* per lb., the above prices are practically the cost-prices of the growers. In all likelihood as the war-scare vanishes the market will assume a firmer position, as all the wealthy growers would rather hold their stock than sell it. Pure otto should never sell in Bulgaria under 17*s.* when the crop is rich, and never under 24*s.* when the crop is poor.

The quality of the new otto is exceptionally sweet in aroma and rich in bouquet, with physical properties as follows: Congealing-point, from 18·5° to 21° C.; sp. gr., at 30° C., from 0·850 to 0·854; optical rotation from −2° 20′ to −2° 50′; and percentage of stereoptene from 18° to 20°. These figures cover all pure otto of this year's yield, and consumers may well be sure that any otto coming from Bulgaria and showing different figures is certainly tampered with. In a year like this, when the crop is so rich and the price of pure otto so ridiculously low, it is the earnest hope of all who are fighting against the spread of adulteration in Bulgaria that all consumers of otto abroad—whether large or small—should not only exact from their suppliers, but insist on getting, the pure article. Pure otto is always the cheapest otto to use. When an article is adulterated, it is always the consumer who pays for the sophistication. It cannot surely be true what so many doctors here assert in justification of their "put-up" grades, that consumers abroad actually prefer the adulterated stuff to the pure article.

LINGUISTIC ADVANTAGES.—A pharmacist who ardently believes in the higher education of the pharmacist, and is himself a typical example of his ideal, is fond of giving concrete instances of the business value of liberal culture and scientific training. This is a specimen: "A Belgian, who could hardly make himself intelligible in English, brought a small quantity of white powder to the pharmacist and asked him if he knew what it was and could supply him with more of the same. The pharmacist, who speaks French fluently, delighted the customer by talking to him in his own tongue, and so at once gained his confidence. Acting on the clues given by the customer, the pharmacist's task of analysing the powder was much simplified. He ascertained the qualitative and quantitative composition of the powder, and served the customer with it. This transaction led to a highly profitable connection."